Post-Remedial Excavation Confirmation Sample Report Parcel A, Report No. 3

McDonnell Douglas C-6 Facility Los Angeles, California

July 1997



# POST-REMEDIAL EXCAVATION CONFIRMATION SAMPLE REPORT PARCEL A REPORT NO. 3

## McDONNELL DOUGLAS C-6 FACILITY LOS ANGELES, CALIFORNIA

**July 1997** 

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Appendices for this document are on file at Boeing Realty Corporation, Long Beach, California.

#### **SECTION 1.0**

#### INTRODUCTION

In October 1996, Montgomery Watson (Montgomery) was retained by McDonnell Douglas Realty Company (MDRC) to assist with the redevelopment of Parcel A (the Site) of their C-6 facility located in Los Angeles, California. Figure 1 presents the C-6 facility. Figure 2 delineates the Site. (Note: Building 40 was previously not included in the Site as reported by Montgomery (1997(b,c)) — Building 40 has since been included in the Site as presented herein.) The Site was formerly used to manufacture and store aircraft parts.

#### 1.1 OVERVIEW

The Site consists of the northernmost quarter of the C-6 facility, encompassing approximately 50 acres. Demolition of the following buildings at the Site has occurred: Building 29, 33, 34, 36, 37, 57, 58, 61, and 67. Demolition of the following buildings is pending: Building 40, 41, 43/44, 45, and 66-A.

Information gathered during the data compilation and evaluation phase of this project indicated the presence of petroleum products and other chemicals of concern in the surface and subsurface.

A soil sampling and remedial excavation effort is being conducted in conjunction with the removal of foundations, slabs, and below-ground structures. The purpose of this effort is to assess soil quality and remove soil affected with petroleum hydrocarbons and other chemicals of concern in preparation for redevelopment of the Site. Soil which is determined to be affected with petroleum hydrocarbons and other chemicals is excavated and stockpiled at the Site. Confirmation samples are collected along the walls and floor of each remedial excavation to confirm that the surface soil (upper 12 feet) meets soil screening criteria.

Confirmation sampling activities discussed in this report are from remedial excavation activities conducted within Building 37 and the adjacent area to the east, known as "the Gravel Yard."

#### 1.2 PURPOSE AND OBJECTIVE

This document presents the results of confirmation sampling conducted in excavation areas within and adjacent to Building 37. Specifically, this document is the third in a series of confirmation sample reports which follows the facility-wide strategy for assessing and screening the analytical data to confirm that the surface soil (upper 12 feet) areas, which

were contaminated with petroleum hydrocarbons and other chemicals of concern, meet soil screening criteria.

The final surface soil residual chemical concentrations in the excavated area must meet soil screening criteria established for the Site and the C-6 facility as presented in Section 3.1 of this report. Along with its companion document, *Soil Stockpile Report*, *Parcel A, Report No. 3* (Montgomery Watson, 1997(f)), this report documents that the Site excavation efforts meets these criteria.

#### **SECTION 2.0**

### BUILDING 37 AND GRAVEL YARD REMEDIAL EXCAVATIONS

Building 37 housed foundry operations in the south central portion of the building, and large machine presses and lathes throughout the building. Foundry and press machines were contained in 15 large pits (approximately 8 feet deep, 20 feet wide, and 60 feet long). A ground floor room on the east side of the building housed the tooling department where employees would produce parts for the machines throughout the facility. A parts cleaning tank sat in a sump within this room. Two clarifiers were located outside the east wall of the building. A hydraulically-powered elevator was located inside the northeast portion of the building.

The adjacent area to the east of Building 37 was the Gravel Yard used for storage of miscellaneous materials and parts from the manufacturing operations of the facility. The facility storm drain outfall to the storm sewer is located near the northeast corner of this area. Historically, a railroad spur crossed the area of the Gravel Yard trending from south to north.

The location of each remedial excavation discussed in this report is presented in Figure 3. To facilitate locating samples and other features in the field, a 20-foot by 20-foot grid has been superimposed over the footprint of Building 37 and the Gravel Yard east of Building 37 as presented in Figure 3. Remedial excavations were recorded using the following nomenclature:

Building No. (B#) - Remedial Excavation (RE) - Chronological Number (#) e.g., B37-RE-4

Pertinent information related to the remedial excavations conducted within and adjacent to Building 37 and the stockpiled soils discussed in this report is presented below.

Excavation/Stockpile(s)	Approximate Volume	Date of Excavation	Stockpile Location(s)
B37-RE-4/AM	70 cu yds	9 May 97	West of Building 61 footprint
B37-RE-4/AN — AP	86 cu yds	2 Jun 97 — 25 Jun 97	Within Building 37 footprint
B37-RE-5/A — D	1085 cu yds total	24 Apr 97 — 12 May 97	West of Building 61 footprint

#### 2.1 SOIL SAMPLING

Grid sampling, hot spot sampling, and confirmation sampling have been employed at Building 37. Detailed procedures for these activities are outlined in the Sampling and Analysis Plan for Demolition Activities at the Douglas Aircraft Company C-6 Facility prepared by Integrated Environmental Services, Inc. (IESI, 1997(a)) and previously submitted to the Regional Water Quality Control Board (RWQCB). In addition, stockpile sampling was performed on the excavated material. These procedures can be summarized as follows:

#### 2.1.1 Grid Sampling

Grid sampling was collected at predetermined, regular intervals of a grid placed over the footprint of Building 37. A 20 feet by 20 feet grid was employed.

Grid samples were collected by first exposing "fresh" soil beneath the surface using a stainless steel utensil or similar device. A photoionization detector (PID) was used to measure headspace organic vapor concentrations in the freshly exposed soil at each grid node. Soil samples were collected for analysis where at least one of the following conditions existed: 1) the headspace VOC reading exceeded 5 ppm, (2) areas where staining of the soil was visible, or (3) areas where odors were noticeable.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet or drive sampler. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve.

The grid coordinate system used in the naming of samples from Building 37 is presented in Figure 3.

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Grid samples have been analyzed according to the analytical schedule presented in Table 1.

#### 2.1.2 Hot Spot Sampling

Hot spot sampling was conducted at predetermined locations where former items of concern were located (e.g., pits, sumps), and at other locations where demolition activities revealed soil which may have been affected by petroleum hydrocarbons or other chemicals of concern.

Hot spot samples were collected by first exposing "fresh" soil beneath the surface using a stainless steel utensil or similar device. A PID was used to measure headspace organic vapor concentrations in the freshly exposed soil at each location. Soil samples were collected for analysis where at least one of the following conditions existed: 1) the headspace VOC reading exceeded 5 ppm, (2) areas where staining of the soil was visible, or (3) areas where odors were noticeable.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet or drive sampler. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve.

Building No. (B#) - Grab Sample (GS) - Chronological Number (#) - Sample Depth (feet) e.g., B37-GS-42-3'

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Hot spot samples have been analyzed according to the analytical schedule presented in Table 1.

#### 2.1.3 Stockpile Sampling

Excavated soil was placed in stockpiles each consisting of approximately 250 cubic yards of soil. Generally, stockpile samples were collected at a frequency of approximately one sample per stockpile. Stockpile samples were collected from the most noticeably affected soil within the stockpile. Samples were collected by using a shovel to cut vertically into the side of a stockpile at each sample location to expose "fresh" soil; samples were then collected from the exposed vertical wall and headspace VOC concentrations were measured using the PID.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet or drive sampler. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve.

Building No.(B#) - Remedial Excavation No.(RE#) - Stockpile Chronological Number (SP#) e.g., B37-RE4-SP38

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis.

Stockpile samples have been analyzed according to the analytical schedule presented in Table 1.

#### 2.1.4 Confirmation Sampling

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Confirmation samples were collected along the walls and floor of each remedial excavation to confirm that the surface soil (upper 12 feet) meets soil screening criteria. Confirmation sampling was conducted at a frequency of at least one sample location each 20 feet along the walls and floor of each excavation.

Soil removal continued at a particular location until the following conditions were met: 1) the headspace VOC reading in freshly exposed soil was less than or equal to 5 ppm, and soil staining was not visible, and odors were not noticeable, or 2) the maximum excavation depth of 12 feet had been reached. A confirmation sample was collected when these conditions were met. Iterations of additional soil excavation were conducted as required until confirmation sample analytical data indicated that *in situ* soil quality met the soil screening criteria established in Section 3.1 of this report.

Confirmation soil samples were collected by first exposing "fresh" soil beneath the surface of a wall and floor of an excavation using a stainless steel utensil or similar device. Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet or drive sampler. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve.

Building No. (B#) - Grab Sample (GS) - Chronological Number (#) - Sample Depth (feet) e.g., B37-GS-42-3'

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Confirmation samples have been analyzed according to the analytical schedule presented in Table 1; however, some confirmation sample analyses were limited to target-specific chemicals once such analytes were identified either through previous sampling activities or historical site knowledge.

#### 2.2 IN SITU SOIL QUALITY

#### 2.2.1 B37-RE-4 Remedial Excavation

Initial soil removal at remedial excavation B37-RE-4 began in March 1997 as previously reported by Montgomery Watson (1997(b,c)). Additional soil removal at remedial excavation B37-RE-4 was required based on elevated PID readings, visual observations, or noticeable odors and was conducted from May 9, 1997 through June 25, 1997. Approximately 70 cubic yards of stockpiled soil associated with this additional excavation was removed with an excavator, transported and stockpiled west of the footprint of Building 61 (Stockpile AM).

Initial confirmation samples were collected from the walls and floor of this excavation. An overview of confirmation sample locations is presented in Figure 4. Several confirmation samples revealed elevated analyte concentrations *in situ* as follows:

Sample ID	<u>Analyte</u>
B37-GS-178-1.5'	arsenic
B37-GS-180-1.5'	arsenic
B37-GS-165-1.5'	SVOCs

Review of historical information did not reveal an association of arsenic within this area adjacent to Building 37. Locations of these confirmation samples are presented in Figure 4A. Analytical data are summarized in Table 2.

Additional soil samples were collected (using the hand auger and drive sampler technique) at the locations of the confirmation sample locations presented above to evaluate the vertical extent of the affected soil. These samples were identified and selectively analyzed as follows:

Sample ID	<u>Analyte</u>
B37-GS-178A-3' B37-GS-178B-5'	metals metals
B37-GS-180A-3' B37-GS-180B-5'	metals metals
B37-GS-165A-3'	SVOCs
B37-GS-165B-5'	SVOCs

The locations of these sample locations are presented in Figure 4A. Analytical data are summarized in Table 2.

#### Second Iteration Excavation and Confirmation Sampling Activity

Based on the additional characterization data from those samples described above, additional soil was overexcavated around the original confirmation sample locations to remove arsenicand SVOC-affected soil as follows:

On June 2 and 3, 1997, approximately 50 cubic yards of arsenic-affected soil was excavated and stockpiled within the Building 37 footprint (Stockpile AN).

On June 3 and 11, 1997, approximately 30 cubic yards of SVOC-affected soil was excavated and stockpiled within the Building 37 footprint (Stockpile AO).

Additional confirmation samples were collected from these second iterative excavation areas and selectively analyzed as follows:

Sample ID	<u>Analyte</u>
B37-GS-178C-3'	metals
B37-GS-178D-3'	metals
B37-GS-178E-3'	metals
B37-GS-178F-3'	metals
B37-GS-178G-3'	metals
B37-GS-180C-3'	metals
B37-GS-180D-3	metals
B37-GS-180E-3'	metals
B37-GS-180F-3'	metals
B37-GS-180G-3'	metals
B37-GS-165C-3'	SVOCs
B37-GS-165D-3'	SVOCs
B37-GS-165E-3'	SVOCs
B37-GS-165F-3'	SVOCs
B37-GS-165G-3'	SVOCs

Analytical data from these confirmation samples revealed that the SVOC-affected soil had been removed; however, elevated concentrations of lead and arsenic were detected in confirmation sample B37-GS-180E-3'. Review of historical information did not reveal an association of lead or arsenic within this area adjacent to Building 37. Sample locations are presented in Figure 4B. Analytical data are summarized in Table 2.

#### Third Iteration Excavation and Confirmation Sampling Activity

Based on the second iterative confirmation sample data described above, additional soil was overexcavated around the location of additional confirmation sample B37-GS-180E-3' to remove lead- and arsenic-affected soil as follows:

On June 25, 1997, approximately 6 cubic yards of lead- and arsenic-affected soil was excavated and stockpiled within the footprint of Building 37 (Stockpile AP).

Additional confirmation samples were collected from this third iterative excavation area and selectively analyzed as follows:

Sample ID	<u>Analyte</u>
B37-GS-180E1-5'	metals
B37-GS-180E2-5'	metals
B37-GS-180E3-5'	metals
B37-GS-180E4-5'	metals
B37-GS-180E5-5'	metals

Analytical data from these samples revealed that the lead-affected soil had been removed; however, elevated concentrations of arsenic were detected in confirmation sample B37-GS-180E1-5', and elevated concentrations of arsenic and cadmium were detected in confirmation sample B37-GS-180E3-5'. Sample locations are presented in Figure 4C. Analytical data are summarized in Table 2. Additional excavation in the area of confirmation samples B37-GS-18E1-5' and B37-GS-180E3-5' is scheduled to remove this affected soil.

A complete set of laboratory analytical reports is presented in Appendix A-1.

#### 2.2.2 B37-RE-5 Remedial Excavation

Soil removal at remedial excavation B37-RE-5 was conducted from April 24, 1997 through May 12, 1997. Approximately 1085 cubic yards of stockpiled soil was removed with an excavator, transported and stockpiled west of the footprint to Building 61 (Stockpiles A, B, C, and D).

Seventeen confirmation samples were collected at locations presented in Figure 5. The analytical data for these samples are summarized in Table 3. A complete set of laboratory analytical reports is presented in Appendix A-2.

#### **SECTION 3.0**

#### DATA SUMMARY AND CONCLUSIONS

This section summarizes the soil screening criteria and confirmation sampling data from each remedial excavation discussed in this report and concludes whether all affected soil has been removed, or if additional excavation of affected soil is warranted.

#### 3.1 SOIL SCREENING METHODOLOGY

The soil screening criteria have been developed to satisfy two primary objectives: (1) residual concentrations in soil must be below levels projected to impact underlying drinking water sources, and (2) residual concentrations must be below levels projected to potentially impact human health under future construction and commercial/industrial activities at the Site.

In accordance with these objectives, individual screening criteria were developed for both drinking water and human health protection. The development of each of these screening criteria is discussed below followed by a summary of how these values will be implemented in the evaluation of whether soil which remains at each remedial excavation meets the soil screening criteria.

#### **Drinking Water**

The generalized hydrostratigraphic succession at the Site is as follows (Kennedy/Jenks, 1996(b); Dames & Moore, 1993; Department of Water Resources, 1961):

#### **SURFACE**

Bellflower Aquitard Gage Aquifer El Segundo Aquitard Lynwood Aquifer

Depth to groundwater at the Site is approximately 65 feet. Hydrostratigraphic information from voluminous data collected at the neighboring Del Amo and Montrose Chemical Superfund Sites can be correlated with subsurface information collected at the Site. Hydrostratigraphic correlations suggest that the shallowest groundwater at the Site occurs in the Bellflower Aquitard, which is not recognized as a drinking water source in the region (Dames & Moore, 1993).

Although the depth to the top of the Gage Aquifer should vary from approximately 120 to 150 feet (from west to east) across the Site, the Gage Aquifer is not utilized as a source of drinking water in the region (Dames & Moore, 1993). Consequently, the shallowest drinking water resource in the region would therefore be the Lynwood Aquifer, projected to occur at the depths of approximately 210 to 240 feet (from west to east) across the Site.

Based on the depth to the first drinking water source, the following permissible concentrations to 12 feet below ground surface have been approved by the RWQCB:

Analytes	Permissible Level		
TRPH			
C4 - C12	2,000 mg/kg		
C13 - C22	10,000 mg/kg		
C22+	50,000 mg/kg		
Metals	TTLC and STLC		

#### Notes:

TTLC: Total Threshold Limit Concentration per CCR Title 22. STLC: Soluble Threshold Limit Concentration per CCR Title 22.

A Waste Extraction Test (WET) is performed on samples with total metal concentration(s) greater than 10 times the STLC but less than the TTLC, per CCR Title 22.

#### Human Health

Site-specific health-based remediation goals (HBRGs) were developed by Integrated Environmental Services, Inc. using standard United States Environmental Protection Agency (USEPA) and California Environmental Protection Agency (Cal/EPA) methodologies. HBRGs were derived assuming future commercial industrial land use with an interim construction phase. Each HBRG will be used as a predictor of the risk posed by individual VOC, SVOC, PCB and metal contaminants in soil. The additive effects of multiple contaminants have been accounted for by setting conservative risk levels at 1x10<sup>-6</sup> for carcinogens and 0.2 for toxicants. The final cumulative risks for all residual contaminants at the Site will be addressed in the post-remedial risk assessment. Table 4 summarizes the HBRGs to be used at the Site. A more detailed discussion of the methodologies used to derive these values has been presented in the *Health-Based Remediation Goals for Surface Soils* document (IESI, 1997(b)).

#### **Evaluation Process**

All confirmation soil data at the Site will undergo the soil screening evaluation process depicted in Figure 6. This evaluation process incorporates both drinking water and human health based criteria. Additional soil excavation and/or treatment will be required at locations where confirmation sample data fail any portion of this test.

#### 3.2 REMEDIAL EXCAVATION EVALUATIONS

Chemicals of concern at the Site can be summarized as follows:

- Petroleum hydrocarbons
- VOCs
- SVOCs
- PCBs
- Metals

The sampling and analysis program for remedial excavations conducted within Building 37 and the Gravel Yard was conservatively focused on these chemicals of concern by implementing the following analytical schedule:

- All samples were analyzed for TRPH and metals.
- All samples which contained TRPH in concentration greater than 10,000 mg/kg were subsequently analyzed for carbon chain length.
- All grid samples were additionally analyzed for VOCs and SVOCs.
- All stockpile samples were additionally analyzed for VOCs and SVOCs.
- Stockpile samples were additionally analyzed for PCBs at a frequency of one sample per remedial excavation.
- For hot spot samples, TRPH was used as an initial screen to determine which samples would be analyzed for VOCs and SVOCs; only that sample with highest TRPH collected from a particular hot spot area was analyzed for VOCs and SVOCs.

Additionally, the post-remedial excavation confirmation sampling analytical program (see Table 1) was designed to ensure that residual soils (upper 12 feet) meet the soil screening levels.

#### 3.2.1 B37-RE-4 Remedial Excavation

Several iterations of soil removal were conducted at remedial excavation B37-RE-4 as presented in Section 2.2.1 of this report. Data for all confirmation (and additional characterization) samples are presented in Table 2. Data representing *in situ* soil quality can be summarized as follows:

<u>Petroleum Hydrocarbons:</u> The maximum concentration of TRPH in a confirmation sample collected from the subject additional remedial excavation was 1700 mg/kg (sample B37-GS-170-1.5'). This concentration is below the 10,000 mg/kg threshold concentration and therefore TRPH was not speciated.

**VOCs:** VOCs were not detected.

<u>SVOCs</u>: Various SVOCs were detected; however, none were reported in the third iterative confirmation samples in concentration which met or exceeded respective HBRGs.

<u>PCBs:</u> Confirmation samples for the additional soil removal activities at B37-RE-4 were not analyzed for PCBs. However, two confirmation samples from previous soil removal activities at B37-RE-4 were analyzed for PCBs (Montgomery Watson, 1997(c). PCBs were not detected in one sample (B37-GS-145A-6'); however, "trace" concentration was reported in the other sample (B37-GS-137A-6').

Metals: Arsenic was present in third iterative confirmation sample B37-GS-180E1-5' above the HBRG. Arsenic and cadmium were present in third iterative confirmation sample B37-GS-180E3-5' above HBRGs. Metals were present in concentration greater than 10 times the STLC in the following samples: B37-GS-163-1.5' (cadmium), B37-GS-164-1.5' (cadmium, chromium), and B37-GS-166-1.5' (chromium and lead); however, soluble concentrations did not meet or exceed respective STLCs when analyzed using the WET. All other metal concentrations were below respective TTLC, 10 times STLC, and HBRGs.

Conclusion: The data indicate that additional removal of soil affected with arsenic and cadmium in the localized area of third iterative confirmation samples B37-GS-180E1-5' and B37-GS-180E3-5' is warranted. The data indicate that the residual soils in other areas of the additional B37-RE-4 excavation meet the soil screening criteria established in Section 3.1 of this report. Approval to backfill these areas is requested.

#### 3.2.2 B37-RE-5 Remedial Excavation

Confirmation sample data are presented in Table 3 and can be summarized as follows:

<u>Petroleum hydrocarbons</u>: The maximum concentration of TRPH in a confirmation sample collected from this additional remedial excavation was 130 mg/kg (sample B37-GS-198-2'). This concentration is below the 10,000 mg/kg threshold concentration and therefore TRPH was not speciated.

**VOCs:** VOCs were not detected.

<u>SVOCs</u>: Chrysene was detected in sample B37-GS-188-2' in concentration of 0.220 mg/kg. This concentration is below the HBRG for chrysene of 114 mg/kg.

<u>PCBs</u>: PCBs were detected in sample B37-GS-198-2' in concentration of 0.032 mg/kg. This concentration is below the HBRG for aroclor 1254 of 0.870 mg/kg.

Metals: All concentrations were below their respective TTLC, 10 times STLC, and HBRGs.

<u>Conclusion:</u> The data indicate that the residual soils in the additional B37-RE-5 excavation meet the soil screening criteria established in Section 3.1 of this report. Approval to backfill this excavation is requested.

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#### **SECTION 4.0**

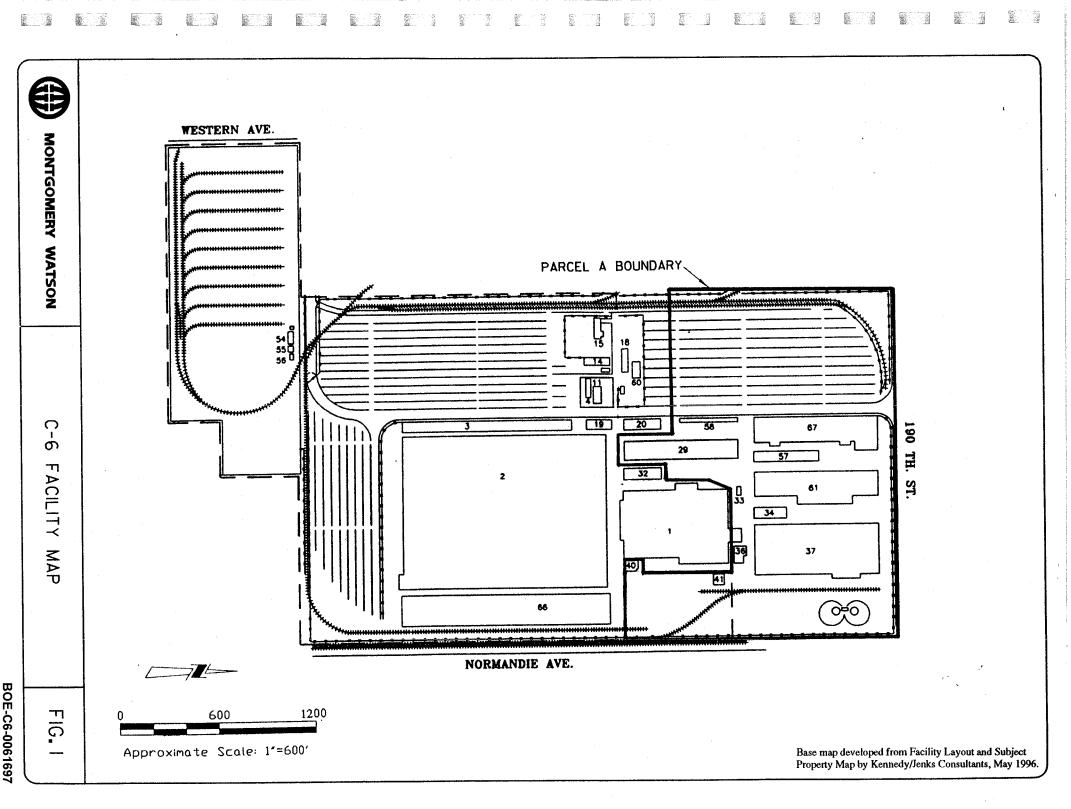
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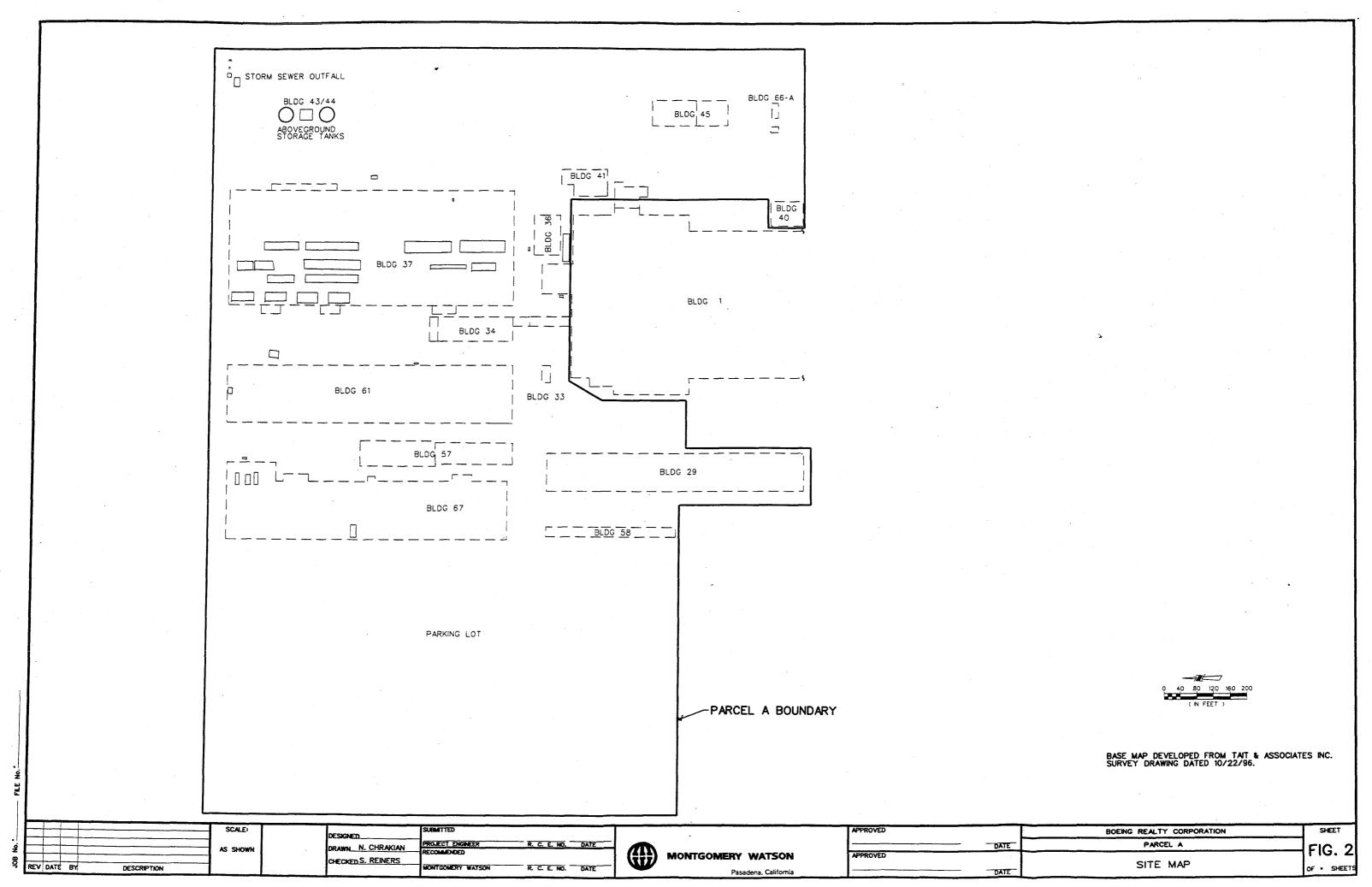
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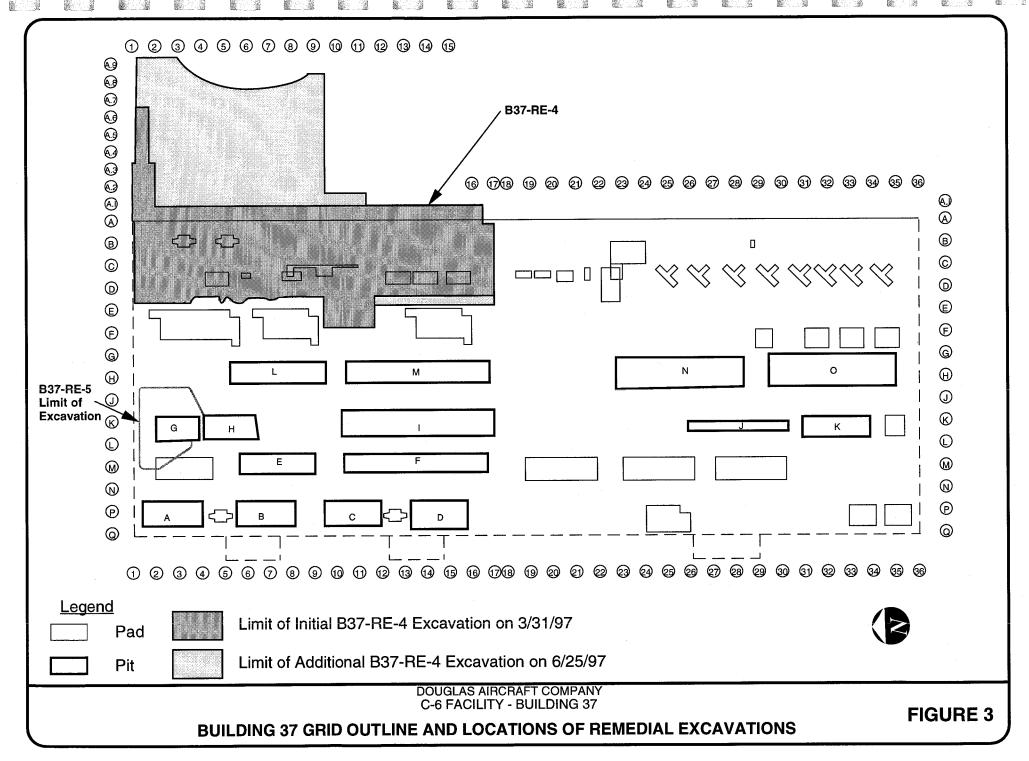
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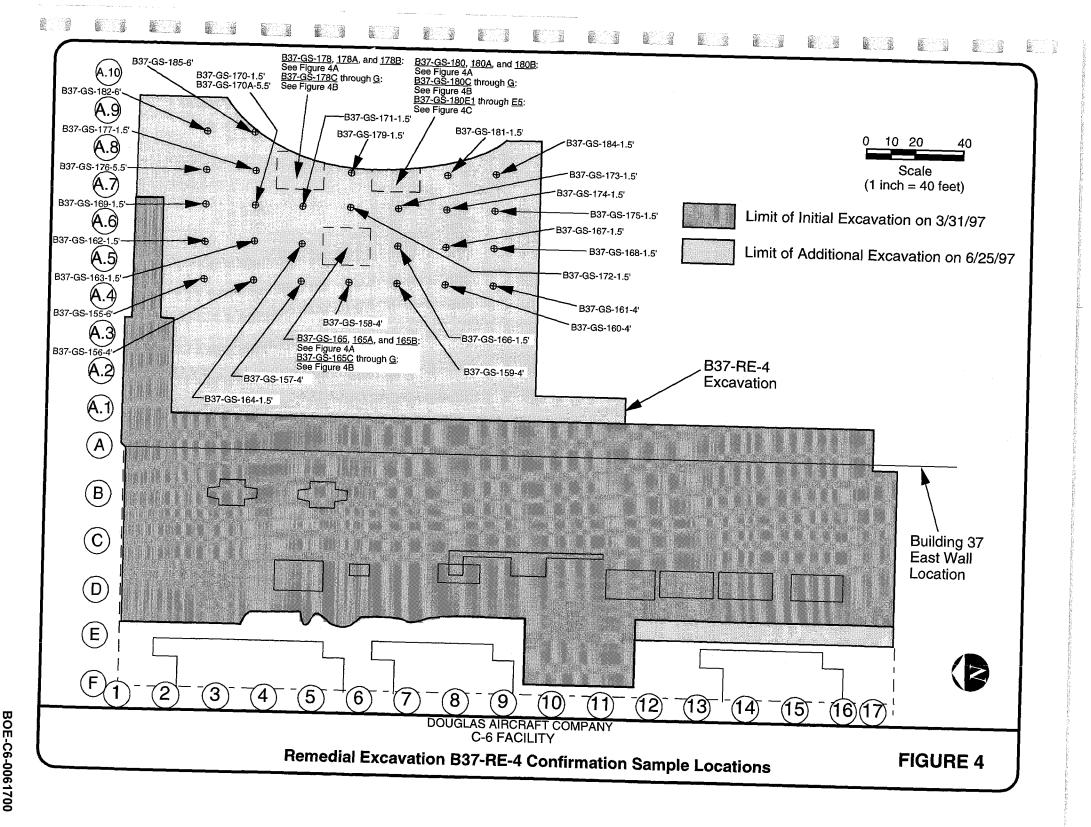
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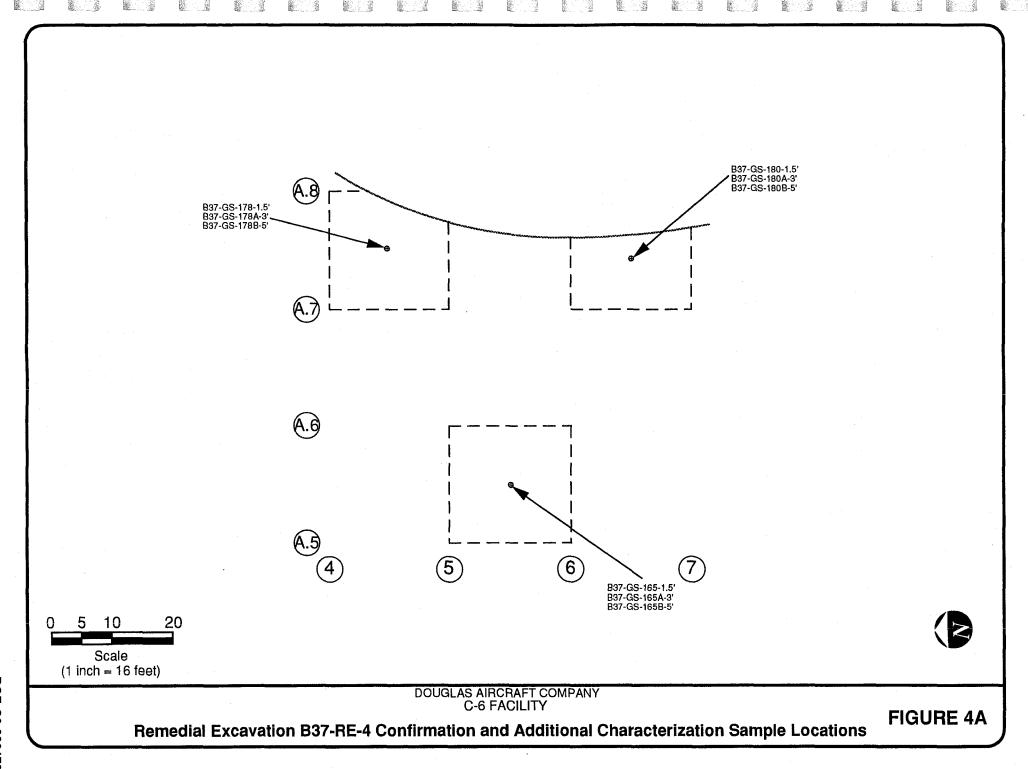


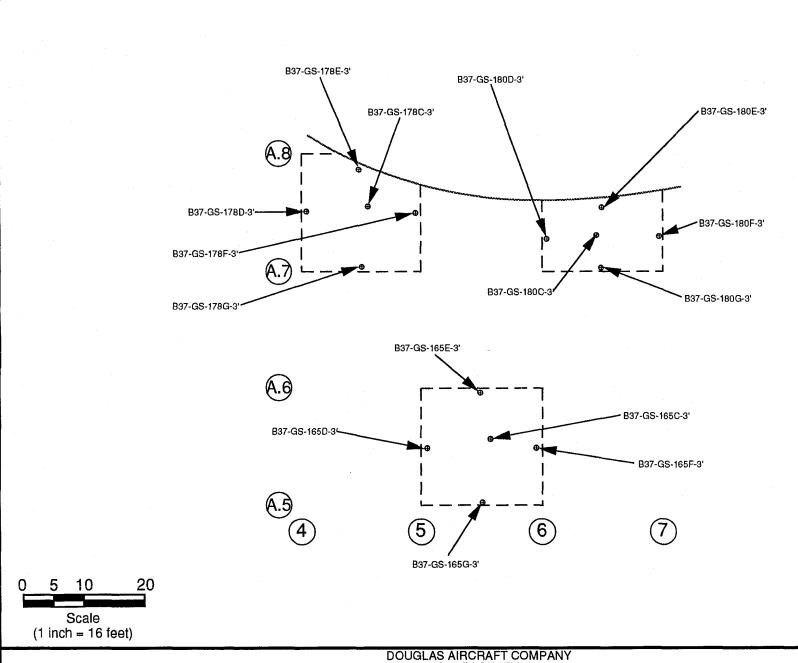








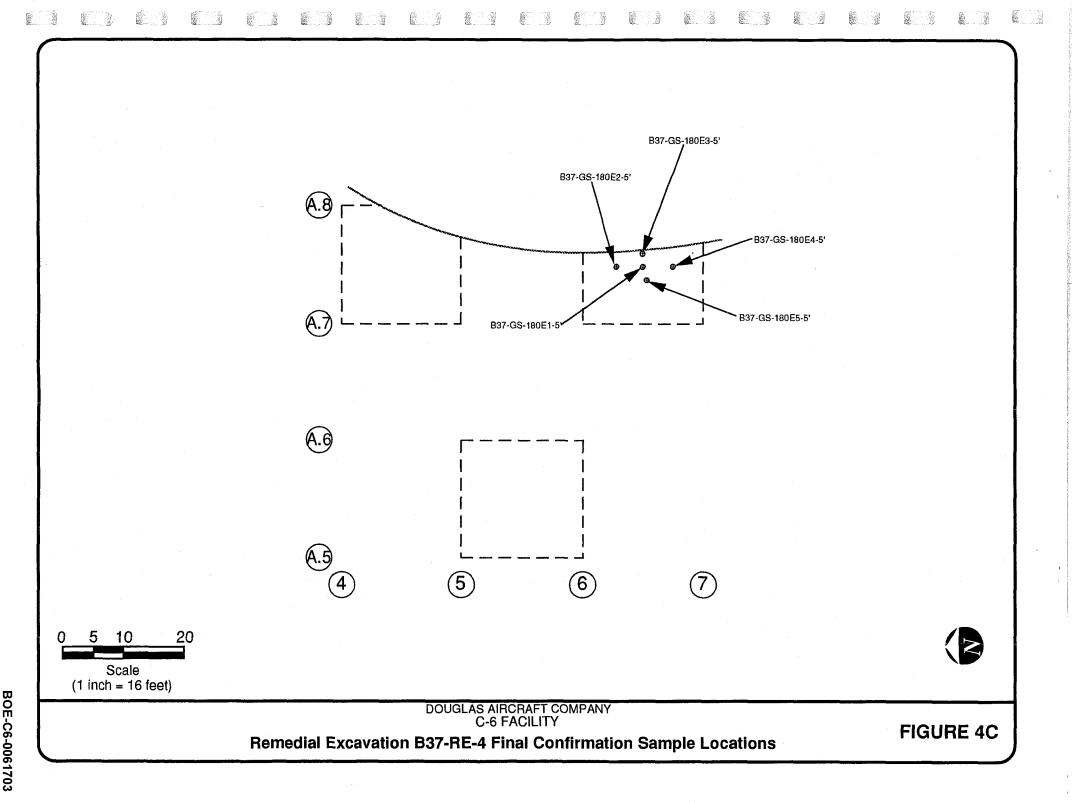




DOUGLAS AIRCRAFT COMPANY C-6 FACILITY

Remedial Excavation B37-RE-4 Additional Confirmation Sample Locations

**FIGURE 4B** 



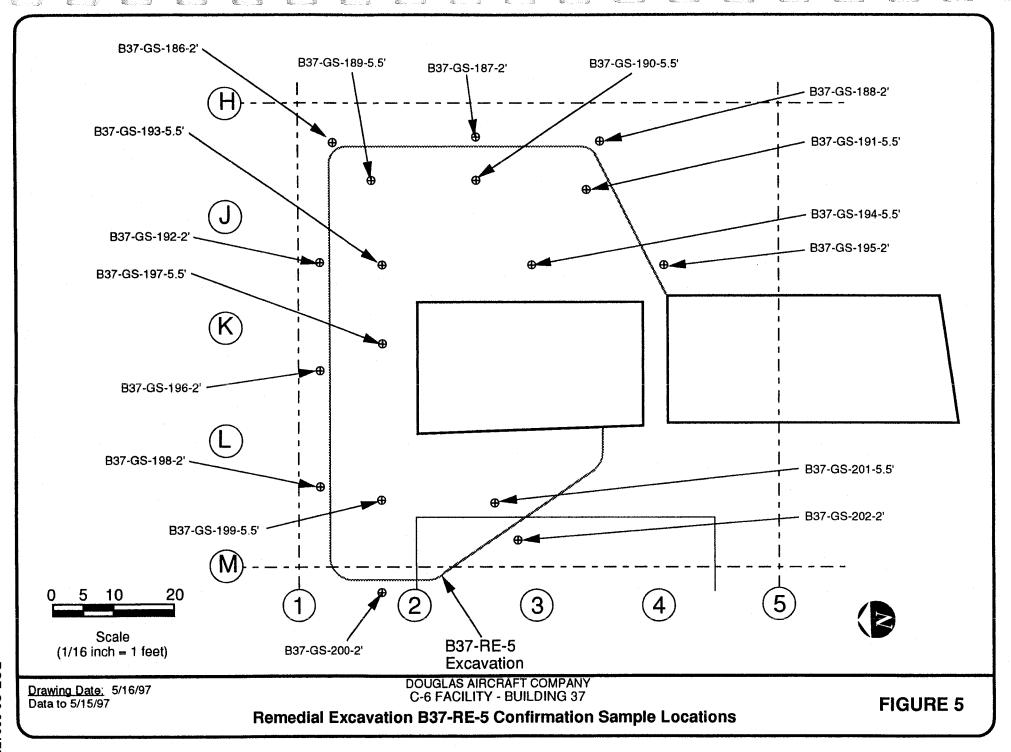
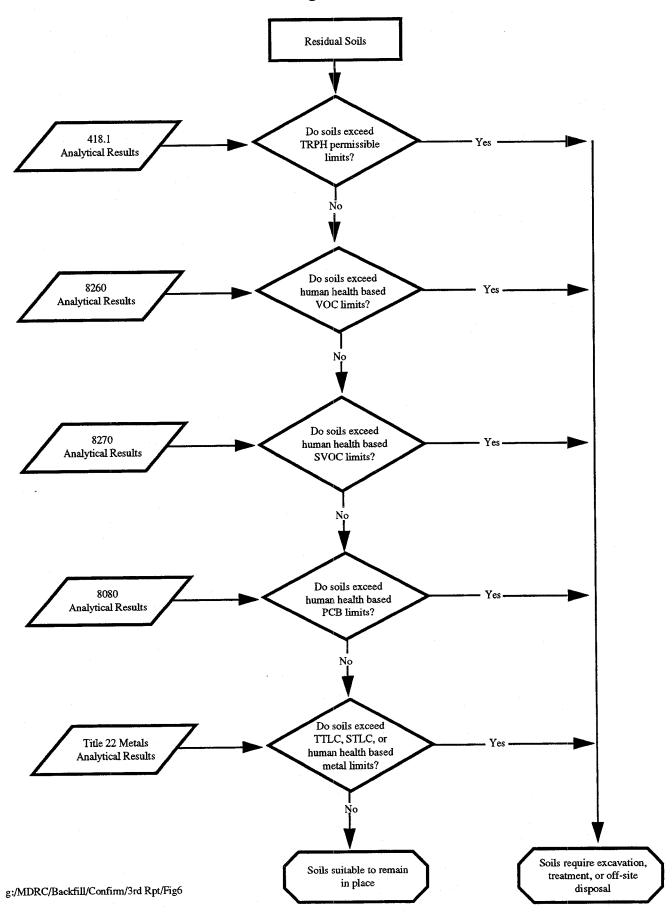


FIGURE 6
Soil Screening Evaluation Process



100

250

### **Tables**



TABLE 1
Summary of Soil Sample Analytical Methods

Sample Type	EPA Method	Analyte
Grid Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs
	8270	SVOCs
Hot Spot Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs (b)
	8270	SVOCs (b)
Stockpile Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs
	8270	SVOCs
	8080	PCBs (c)
Confirmation Sample	418.1	TRPH (a)
_	6000/7000	Metals
	8260	VOCs (d)
	8270	SVOCs (d)
	8080	PCBs (e)

#### Notes:

TRPH Total Recoverable Petroleum Hydrocarbons

VOCs Volatile Organic Compounds

SVOCs Semi-volatile Organic Compounds.

PCBs Polychlorinated Biphenyls

- (a) Samples exhibiting TRPH concentration greater than 10,000 mg/kg were submitted for carbon chain analysis.
- (b) Only the sample with highest TRPH concentration from a hot spot area was analyzed for VOCs and SVOCs.
- (c) One sample per remedial excavation.
- (d) The number of confirmation samples analyzed for VOCs and SVOCs is approximately equal to the number of stockpile samples analyzed for VOCs and SVOCs. Confirmation samples are selected for analysis of VOCs and SVOCs based on highest TRPH concentration, and location of evenly spaced confirmation sample locations.
- (e) Generally, one sample per each remedial excavation, or following the removal of each 2500 cubic yards of soil, whichever is less.

#### **TABLE 2 Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples Page 1 of 19

	ı	Sample Number, Collection Date, Grid Location and Depth				
Analyte	EPA Method	B37-GS-155-6' 4/29/97 A.4/A.5-2.5 @ 6' bgs*	B37-GS-156-4' 4/29/97 A.4/A.5-3.5 @ 4' bgs*	B37-GS-157-4' 4/29/97 A.4/A.5-4.5 @ 4' bgs*		
TRPH (mg/kg)	418.1	<8.0	<8.0	<8.0		ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)	· · · · · · · · · · · · · · · · · · ·				(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	130	97	110	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0.1	<0.1	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	22	20	26	2,500	5
Cobalt	6010	11	5.5	7.7	8,000	80
Copper	6010	7.8	11	15	2,500	2 5
Lead (total)	6010	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	8.7	9.7	15	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	77
Vanadium	6010	24	25	27	2,400	2 4
Zinc	6010	52	36	45	5,000	250
VOCs (mg/kg)	8260		ND ND			
SVOCs (1) (mg/kg)						
Acenaphthene	8270	<b></b>	<0.100			
Anthracene	8270		<0.100		*	
Benzo (a) Anthracene	8270		<0.100	<u></u>		
Benzo (b) Fluoranthene	8270		<0.250			
Benzo (k) Fluoranthene	8270		<0.250			
Benzo (a) Pyrene	8270		<0.250	<u></u>		
Benzo (g,h,i) Perylene	8270		<0.250			
Bis(2-Ethylhexyl) Phthalate	8270		<0.100			
Chrysene	8270		<0.100			
Dibenz (a,h) Anthracene	8270		<0.100	-		
Fluoranthene	8270		<0.100			
Indeno(1,2,3-cd)Pyrene	8270		<0.250			
2-Methylnaphthalene	8270		<0.100			
Naphthalene	8270		<0.100			
Phenanthrene	8270		<0.100			
Pyrene	8270		<0.100			
Carbon Chain Range (mg/kg)	sim. dist.					
PCBs (mg/kg)	8080					

mg/kg = milligrams per kilogram mg/L = milligrams per liter -- = not analyzed bgs = below ground surface ND = not detected sim.dist. = simulated distillation VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

178

(33)

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

(1) SVOCs not listed were not detected

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

## TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 2 of 19

	. [	Sample Number, Collection Date, Grid Location and Depth				
Analyte	EPA Method	B37-GS-158-4' 4/29/97 A.4/A.5-5.5 @ 4' bgs*	B37-GS-159-4' 4/29/97 A.4/A.5-6.5 @ 4' bgs*	B37-GS-160-4' 4/29/97 A.4/A.5-7.5 @ 4' bgs*		
	1					
TRPH (mg/kg)	418.1	<8.0	<8.0	<8.0		ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)					(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	91	120	100	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	7.5	0.75
Cadmium	6010	<0.1	<0.1	<0.1	100	11
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	22	22	14	2,500	5
Cobalt	6010	6.7	7.6	7.1	8,000	80
Copper	6010	17	12	9.2	2,500	25
Lead (total)	6010	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	2 0	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	14	14	10	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	11
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	
Vanadium	6010	28	24	18	2,400	2 4
Zinc	6010	43	39	30	5,000	250
VOCs (mg/kg)	8260					
SVOCs (1) (mg/kg)	· · · · · · · · · · · · · · · · · · ·					
Acenaphthene	8270					
Anthracene	8270					
Benzo (a) Anthracene	8270					
Benzo (b) Fluoranthene	8270					
Benzo (k) Fluoranthene	8270					
Benzo (a) Pyrene	8270			-		
Benzo (g,h,i) Perylene	8270		-	<u></u>		
Bis(2-Ethylhexyl) Phthalate	8270					
Chrysene	8270		-			
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270					
Indeno(1,2,3-cd)Pyrene	8270					
2-Methylnaphthalene	8270		J-			
Naphthalene	8270					
Phenanthrene	8270					
Pyrene	8270					
	and distributions are a loss ma-					
Carbon Chain Range (mg/kg)	sim. dist.	<b>-</b> 1				
				17 (C. C. C		
PCBs (mg/kg)	8080	1				

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
bgs = below ground surface
ND = not detected
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration TRPH = Total Recoverable Petroleum Hydrocarbons

(1) SVOCs not listed were not detected

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

## TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 3 of 19

	Γ	Sample Number, Collection Date, Grid Location and Depth					
Analyte	EPA Method	B37-GS-161-4' 4/29/97 A.4/A.5-8.5 @ 4' bgs*	B37-GS-162-1.5' 4/29/97 A.5/A.6-2.5 @ 1.5' bgs*	B37-GS-163-1.5' 4/29/97 A.5/A.6-3.5 @ 1.5' bgs*			
			T T T T T T T T T T T T T T T T T T T				
TRPH (mg/kg)						Regulatory Levels	
Tido 00 Books ( 0)					TTLC	STLC	
Title 22 Metals (mg/kg)	0010				(mg/kg)	(mg/L)	
Antimony	6010	<5.0	<5.0	<5.0	500	15	
Arsenic Barium	6010	<1.0	<1.0	<1.0	500	5	
	6010	100	97	100	10,000	100	
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75	
Cadmium	6010	<0.1	<0.1	16 (2)	100	1	
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5	
Chromium (total)	6010	20	20	20	2,500	5	
Cobalt	6010	. 6.4	6.3	7.5	8,000	80	
Copper	6010	13	9.8	9.8	2,500	2.5	
Lead (total)	6010	<1.0	3.0	28	1,000	5	
Mercury	7471	<0.01	<0.01	<0.01	20	0.2	
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350	
Nickel	6010	11	8.7	12	2,000	20	
Selenium	6010	<1.0	<1.0	<1.0	100	1	
Silver	6010	<0.1	<0.1	<0.1	500	5	
Thallium	6010	<5.0	<5.0	<5.0	700	7	
Vanadium	6010	23	_22	22	2,400	24	
Zinc	6010	38	41	98	5,000	250	
		2560	T				
VOCs (mg/kg)	8260			<b></b>			
0100 (1) ( 1)							
SVOCs (1) (mg/kg)		<del></del>	<del> </del>				
Acenaphthene	8270			<del></del>			
Anthracene	8270	**					
Benzo (a) Anthracene	8270			·			
Benzo (b) Fluoranthene	8270						
Benzo (k) Fluoranthene	8270						
Benzo (a) Pyrene	8270	••					
Benzo (g,h,i) Perylene	8270	***					
Bis(2-Ethylhexyl) Phthalate	8270						
Chrysene	8270						
Dibenz (a,h) Anthracene	8270			<del></del>			
Fluoranthene	8270						
Indeno(1,2,3-cd)Pyrene	8270			<del></del>			
2-Methylnaphthalene	8270		**				
Naphthalene	8270						
Phenanthrene	8270						
Pyrene	8270	••					
	<del></del>						
Carbon Chain Range (mg/kg)	sim. dist.						
DOD- (A-)			Г				
PCBs (mg/kg)	8080		<u></u>				

mg/kg = milligrams per kilogram mg/L = milligrams per liter

-- = not analyzed

bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

(1) SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 0.82 mg/L.

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

## TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 4 of 19

		Sample Number	er, Collection Date, Grid Loca	tion and Depth		
Analan	Pos Massard	B37-GS-164-1.5' 4/29/97	B37-GS-165-1.5' 4/29/97	B37-GS-165A-3' 5/22/97		
Analyte	EPA Method	A.5/A.6-4.5 @ 1.5' bgs*	A.5/A.6-5.5 @ 1.5' bgs*	A.5/A.6-5.5 @ 3' bgs*		
TRPH (mg/kg)	418,1	7.0	1 00 1		Daniel de	
TAPA (Mg/kg)	1 418.1	76	98	<del></del>		ry Levels
Title 22 Metals (mg/kg)	10040000000000000000000000000000000000				TTLC	STLC
Antimony	6010	<5.0	<5.0		(mg/kg) 500	(mg/L)
Arsenic	6010	<1.0	<1.0			15 5
Barium	6010	120	94		500	
Bervllium	6010	<0.1	<0.1		10,000 75	100
Cadmium	6010	12 (2)	4.5			0.75
Chromium (VI)	7196	<0.5	4.5 <0.5		100 500	<u>1</u>
Chromium (VI) Chromium (total)			36			
Cobalt	6010	50 (3)	6.5		2,500	5
Copper	6010	7.5	24		8,000	80
	6010	27	22		2,500	25
Lead (total)	6010	27			1,000	5
Mercury	7471	<0.01	<0.01	**	20	0.2
Molybdenum Nickel	6010	<0.5	<0.5		3,500	350
	6010	14	12		2,000	20
Selenium	6010	<1.0	<1.0		100	
Silver	6010	<0.1	<0.1		500	5
Thallium	6010	<5.0	<5.0		700	7
Vanadium	6010	31	24		2,400	24
Zinc	6010	84	77		5,000	250
VOCs (mg/kg)	8260		ND I	-		
SVOCs (1) (mg/kg)	<del></del>					
Acenaphthene	8270		0.520	<0.100		
Anthracene	8270		1,200	<0.100		
Benzo (a) Anthracene	8270		14.000 #	<0.100		
Benzo (b) Fluoranthene	8270		16.000 #	<0.250		
Benzo (k) Fluoranthene	8270		6.900	<0.250		
Benzo (a) Pyrene	8270	<u></u>	15.000 #	0.400		
Benzo (g,h,i) Perylene	8270		9.200	<0.250		
Bis(2-Ethylhexyl) Phthalate	8270		<0.100	0.450		
Chrysene	8270	-	14.000	<0.100		
Dibenz (a,h) Anthracene	8270		3.100	<0.100		
Fluoranthene	8270	· ••	18.000	0.170		
Indeno(1,2,3-cd)Pyrene	8270	·	11.000	<0.250		
2-Methylnaphthalene	8270		0.520	<0.100		
Naphthalene	8270		0.600	<0.100		
Phenanthrene	8270		5.900	<0.100		
Pyrene	8270		9.800	0.360		
in 1 section 2						
Carbon Chain Range (mg/kg)	sim. dist.					

mg/kg = milligrams per kilogram mg/L = milligrams per liter -- = not analyzed

bgs = below ground surface

ND = not detected

PCBs (mg/kg)

sim.dist. = simulated distillation VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons
(1) SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 0.92 mg/L.

(3) Waste Extraction Test performed on this sample. Result was 1.6 mg/L.

8080

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

#### TABLE 2 **Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples Page 5 of 19

	[	Sample Number, Collection Date, Grid Location and Depth				
Analyte	EPA Method	B37-GS-165B-5' 5/22/97 A.5/A.6-5.5 @ 5' bgs*	B37-GS-165C-3' 6/11/97 A.5/A.6-5.5 @ 3' bqs*	B37-GS-165D-3' 6/11/97 A.5/A.6-5 @ 3' bgs*		
Allalyte	EFA WELIOU	A.3/A.0-3.3 & 3 Dgs	A.S/A.6-5.5 & 3 Ugs	A.S/A.0-3 & 3 Dgs		
TRPH (mg/kg)	418.1				Regulato	ry Levels
			TOTAL PROPERTY OF THE		TTLC	STLC
Title 22 Metals (mg/kg)	CHANG ACALDALIS I AND MOSTOR IN				(mg/kg)	(mg/L)
Antimony	6010				500	15
Arsenic	6010				500	5
Barium	6010				10,000	100
Beryllium	6010				75	0.75
Cadmium	6010				100	1
Chromium (VI)	7196			<del></del>	500	5
Chromium (total)	6010				2,500	5
Cobalt	6010				8,000	80
Copper	6010				2,500	25
Lead (total)	6010			<del></del>	1,000	5
Mercury	7471	**			20	0.2
Molybdenum	6010				3,500	350
Nickel	6010				2,000	20
Selenium	6010				100	1
Silver	6010				500	. 5
Thallium	6010				700	7
Vanadium	6010				2,400	24
Zinc	6010			-	5,000	250
VOCs (mg/kg)	8260				]	
SVOCs (1) (mg/kg)						
Acenaphthene	8270	<0.100	<0.100	<0.100		
Anthracene	8270	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	<0.100	<0.100	<0.100		
Benzo (b) Fluoranthene	8270	<0.250	<0.250	<0.250		
Benzo (k) Fluoranthene	8270	<0.250	<0.250	<0.250	}	
Benzo (a) Pyrene	8270	<0.250	<0.250	<0.250		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	<0.250		
Bis(2-Ethylhexyl) Phthalate	8270	<0.100	<0.100	<0.100	·	
Chrysene	8270	<0.100	<0.100	0.120		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100		
Fluoranthene	8270	<0.100	<0.100	0.130		
Indeno(1,2,3-cd)Pyrene	8270	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100		
Naphthalene	8270	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.100	<0.100	<0.100		
Pyrene	8270	<0.100	<0.100	0.110		
Carbon Chain Range (mg/kg)	sim, dist.					
PCBs (mg/kg)	8080		i i	<del></del>		

mg/kg = milligrams per kilogram mg/L = milligrams per liter

-- = not analyzed bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

### TABLE 2 **Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples

Page 6 of 19

		Sample Number, Collection Date, Grid Location and Depth				
Analyte	EPA Method	B37-GS-165E-3' 6/11/97 A.6-5.5 @ 3' bgs*	B37-GS-165F-3' 6/11/97 A.5/A.6-6 @ 3' bgs*	B37-GS-165G-3' 6/11/97 A.5-5.5 @ 3' bgs*		
TRPH (mg/kg)	418.1			<u></u>	Regulato	ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)	,		<u></u>		(mg/kg)	(mg/L)
Antimony	6010				500	15
Arsenic	6010				500	5
Barium	6010				10,000	100
Beryllium	6010				75	0.75
Cadmium	6010				100	1
Chromium (VI)	7196			·	500	5
Chromium (total)	6010	<b></b>			2,500	5
Cobalt	6010				8,000	8.0
Copper	6010				2,500	25
Lead (total)	6010				1,000	5
Mercury	7471				20	0.2
Molybdenum	6010				3,500	350
Nickel	6010				2,000	20
Selenium	6010				100	1
Silver	6010				500	5
Thallium	6010	-			700	7
Vanadium	6010				2,400	2 4
Zinc	6010				5,000	250
VOCs (mg/kg)	8260					
SVOCs (1) (mg/kg)						
Acenaphthene	8270	<0.100	<0.100	<0.100		
Anthracene	8270	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	<0.100	<0.100	<0.100		
Benzo (b) Fluoranthene	8270	<0.250	<0.250	<0.250		
Benzo (k) Fluoranthene	8270	<0.250	<0.250	<0.250		
Benzo (a) Pyrene	8270	<0.250	<0.250	<0.250		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	<0.250		
Bis(2-Ethylhexyl) Phthalate	8270	<0.100	<0.100	<0.100		
Chrysene	8270	<0.100	<0.100	<0.100		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100		
Fluoranthene	8270	<0.100	<0.100	<0.100		
Indeno(1,2,3-cd)Pyrene	8270	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100		
Naphthalene	8270	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.100	<0.100	<0.100		
Pyrene	8270	<0.100	<0.100	<0.100		
Carbon Chain Range (mg/kg)	sim. dist.					
PCBs (mg/kg)	8080					

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

-- = not analyzed bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

### TABLE 2 **Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples Page 7 of 19

		Sample Number, Collection Date, Grid Location and Depth				
Analyte	EPA Method	B37-GS-166-1.5' 4/29/97	B37-GS-167-1.5' 4/29/97 A.5/A.6-7.5 @ 1.5' bgs*	B37-GS-168-1.5' 4/29/97 A.5/A.6-8.5 @ 1.5' bgs*		
		T	T		<del></del>	<del></del>
TRPH (mg/kg)	418.1	85	77	69		ry Levels
	<u> </u>				TTLC	STLC
Title 22 Metals (mg/kg)			T		(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	110	100	72	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	8.7	5.5	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	64 (2)	44	19	2,500	5
Cobalt	6010	7.2	6.0	6.1	8,000	80
Copper	6010	30	22	10	2,500	25
Lead (total)	6010	83 (3)	17	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	12	12	7.6	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	11
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	27	28	21	2,400	24
Zinc	6010	98	72	40	5,000	250
200					I	
VOCs (mg/kg)	8260			ND	į	
					i	
SVOCs (1) (mg/kg)			r	,	I	
Acenaphthene	8270			<0.100	J	-
Anthracene	8270			<0.100		
Benzo (a) Anthracene	8270			<0.100		
Benzo (b) Fluoranthene	8270			<0.250	I	
Benzo (k) Fluoranthene	8270			<0.250		
Benzo (a) Pyrene	8270	·		<0.250	I	
Benzo (g,h,i) Perylene	8270			<0.250	I	
Bis(2-Ethylhexyl) Phthalate	8270			<0.100		
Chrysene	8270			<0.100	ı	
Dibenz (a,h) Anthracene	8270			<0.100	I	
Fluoranthene	8270			<0.100		
Indeno(1,2,3-cd)Pyrene	8270			<0.250		
2-Methylnaphthalene	8270			<0.100	I	
Naphthalene	8270		-	<0.100	Į	
Phenanthrene	8270		<u></u>	<0.100	1	
Pyrene	8270			<0.100	I	
					į	
Carbon Chain Range (mg/kg)	sim, dist.				Į	
					I	
PCBs (mg/kg)	8080		<u></u>	<u></u>	J	

mg/kg = milligrams per kilogram mg/L = milligrams per liter

-- = not analyzed

Med

bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

(1) SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 1.8 mg/L.

(3) Waste Extraction Test performed on this sample. Result was 2.1 mg/L.

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

# TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 8 of 19

		Sample Number, Collection Date, Grid Location and Depth				
	T === 1	B37-GS-169-1.5' 4/30/97	B37-GS-170-1.5' 4/30/97	B37-GS-170A-5.5' 5/9/97		
Analyte	EPA Method	A.6/A.7-2.5 @ 1.5' bgs*	A.6/A.7-3.5 @ 1.5' bgs*	A.6/A.7-3.5 @ 5.5' bgs*		
SPOUL ( 4 )	440.4	33	1.700	<8.0	Regulato	ny I avale
TRPH (mg/kg)	418.1	33	1,700	(0.0	TTLC	STLC
Tista 00 Matala (ma/ka)				S 4-3 M	(mg/kg)	(mg/L
Title 22 Metals (mg/kg)	6010	-5.0	<5.0	<5.0	500	15
Antimony	6010	<5.0 <1.0	<1.0	<1.0	500	5
Arsenic	6010	73	97	220	10,000	100
Barium	6010	<0.1	<0.1	<0.1	75	0.75
Beryllium	6010			<0.1	100	1
Cadmium	6010	<0.1	<0.1	<0.1	500	5
Chromium (VI)	7196	<0.5	<0.5			
Chromium (total)	6010	18	17	31	2,500	5
Cobalt	6010	5.1	6,3	9.7	8,000	80
Copper	6010	7.2	11	8.4	2,500	2.5
Lead (total)	6010	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	8.3	9.2	8.0	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	19	22	29	2,400	24
Zinc	6010	37	37	54	5,000	250
VOCs (mg/kg)	8260		ND	ND		
SVOCs (1) (mg/kg)						
Acenaphthene	8270		<0.100	<0.100		
Anthracene	8270		<0.100	<0.100		
Benzo (a) Anthracene	8270		<0.100	<0.100		
Benzo (b) Fluoranthene	8270		<0.250	<0.250		
Benzo (k) Fluoranthene	8270		<0.250	<0.250		
Benzo (a) Pyrene	8270		<0.250	<0.250		
Benzo (g,h,i) Perylene	8270		<0.250	<0.250		
Bis(2-Ethylhexyl) Phthalate	8270		<0.100	<0.100		
	8270		<0.100	<0.100		
Chrysene Cab Arthroson			<0.100	<0.100		
Dibenz (a,h) Anthracene	8270		<0.100	<0.100		
Fluoranthene	8270			<0.100		
Indeno(1,2,3-cd)Pyrene	8270		<0.250			
2-Methylnaphthalene	8270		<0.100	<0.100		
Naphthalene	8270		<0.100	<0.100		
Phenanthrene	8270		<0.100	<0.100		
Pyrene	8270		<0.100	<0.100		
			· · · · · · · · · · · · · · · · · · ·	1		
Carbon Chain Range (mg/kg)	sim. dist.		<u></u>			

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

-- = not analyzed bgs = below ground surface

ND = not detected

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sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

#### TABLE 2 **Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples Page 9 of 19

		Sample Number	er, Collection Date, Grid Loca	ation and Depth		
Analyte	EPA Method	B37-GS-171-1.5' 4/30/97 A.6/A.7-4.5 @ 1.5' bgs*	B37-GS-172-1.5' 4/30/97 A.6/A.7-5.5 @ 1.5' bgs*	B37-GS-173-1.5' 4/30/97 A.6/A.7-6.5 @ 1.5' bgs*		
TRPH (mg/kg)	418.1	52	13	30	Regulato	ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)					(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	110	100	97	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	2.8	2.2	2.2	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	33	27	30	2,500	5
Cobalt	6010	7.4	6.6	7.1	8,000	80
Copper	6010	17	67	44	2,500	2.5
Lead (total)	6010	3.0	13	13	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	11	12	12	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	27	27	29	2,400	2.4
Zinc	6010	65	59	64	5,000	250
ZIIC	0010	- 00				
VOCs (mg/kg)	8260		I			
SVOCs (1) (mg/kg)		Name				
Acenaphthene	8270					
Anthracene	8270					
Benzo (a) Anthracene	8270					
Benzo (b) Fluoranthene	8270					
Benzo (k) Fluoranthene	8270					
Benzo (a) Pyrene	8270			==		
Benzo (g,h,i) Perylene	8270					
Bis(2-Ethylhexyl) Phthalate	8270					
Chrysene	8270					
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270					
Indeno(1,2,3-cd)Pyrene	8270					
2-Methylnaphthalene	8270					
Naphthalene	8270					
Phenanthrene	8270					
Pyrene	8270					
Carbon Chain Range (mg/kg)	sim. dist.					
PCBs (mg/kg)	8080					

mg/kg = milligrams per kilogram mg/L = milligrams per liter -- = not analyzed bgs = below ground surface ND = not detected

34.500

sim.dist. = simulated distillation VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

### **TABLE 2 Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples Page 10 of 19

		Sample Number, Collection Date, Grid Location and Depth				
Analyte	EPA Method	B37-GS-174-1.5' 4/30/97 A.6/A.7-7.5 @ 1.5' bgs*	B37-GS-175-1.5' 4/30/97 A.6/A.7-8.5 @ 1.5' bgs*	B37-GS-176-5.5' 5/1/97 A.7/A.8-2.5 @ 5.5' bgs*		
TRPH (mg/kg)	418.1	<8.0	80	<8.0	Regulator	ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)					(mg/kg)	(mg/L
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	110	110	110	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0.1	1.0	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	19	22	16	2,500	5
Cobalt	6010	6.4	6.6	4.4	8,000	80
Copper	6010	15	17	12	2,500	25
Lead (total)	6010	<1.0	20	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01_	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	9.9	13	7.5	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	· <5.0	<5.0	700	7
Vanadium	6010	23	25	20	2,400	24
Zinc	6010	37	52	40	5,000	250
VOCs (mg/kg)	8260		ND ND			
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
SVOCs (1) (mg/kg)						
Acenaphthene	8270		<0.100			
Anthracene	8270		<0.100			
Benzo (a) Anthracene	8270	<u> </u>	<0.100			
Benzo (b) Fluoranthene	8270		<0.250	<b></b>		
Benzo (k) Fluoranthene	8270	••	<0.250			
Benzo (a) Pyrene	8270		<0.250			
Benzo (g,h,i) Perylene	8270		<0.250			
Bis(2-Ethylhexyl) Phthalate	8270		<0.100			
Chrysene	8270		<0.100			
Dibenz (a,h) Anthracene	8270		<0.100			
Fluoranthene	8270		<0.100			
Indeno(1,2,3-cd)Pyrene	8270		<0.250			
2-Methylnaphthalene	8270		<0.100			
Naphthalene	8270		<0.100			
Phenanthrene	8270		<0.100			
Pyrene	8270		<0.100			
Carbon Chain Range (mg/kg)	sim. dist.	***				
				7-1-1-1		
PCBs (mg/kg)	8080	4-				

mg/kg = milligrams per kilogram

mg/L = milligrams per liter -- = not analyzed

bgs = below ground surface

ND = not detected

122

sim.dist. ≈ simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

#### TABLE 2 **Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples Page 11 of 19

		Sample Number, Collection Date, Grid Location and Depth				
Analyte	EPA Method	B37-GS-177-1.5' 5/1/97 A.7/A.8-3.5 @ 1.5' bgs*	B37-GS-178-1.5' 5/1/97 A.7/A.8-4.5 @ 1.5' bgs*	B37-GS-178A-3' 5/22/97 A.7/A.8-4.5 @ 3' bgs*		
TRPH (mg/kg)	418.1	51	160		Regulato	ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)					(mg/kg)	(mg/L
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	110 (2)(3) #	<1.0	500	5
Barium	6010	120	86	110	10,000	100
Bervilium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0.1	4.6	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	24	18	25	2,500	5
Cobalt	6010	7.1	8.3	7.2	8,000	80
Copper	6010	12	33	16	2,500	25
Lead (total)	6010	<1.0	22	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	11	8.9	8.6	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	25	23	27	2,400	2.4
Zinc	6010	53	51	54	5,000	250
LIIO	1 00.0	1				
VOCs (mg/kg)	8260		ND I			
1003 (mg/kg)	L GEOG		<u> </u>			
SVOCs (1) (mg/kg)						
Acenaphthene	8270		<0.100			
Anthracene	8270		<0.100			
Benzo (a) Anthracene	8270		<0.100			
Benzo (b) Fluoranthene	8270	<u>-</u>	<0.250			
Benzo (k) Fluoranthene	8270		<0.250			
Benzo (a) Pyrene	8270		<0.250			
Benzo (q,h,i) Perylene	8270		<0.250			
Bis(2-Ethylhexyl) Phthalate	8270		<0.100			
Chrysene	8270		0.130			
Dibenz (a,h) Anthracene	8270		<0.100			
Fluoranthene	8270		<0.100			
Indeno(1,2,3-cd)Pyrene	8270		<0.100			
2-Methylnaphthalene	8270		<0.100			
Naphthalene	8270		<0.100			
Phenanthrene	8270		0.100			
	8270		0.130		1	
Pyrene	1 84/0	1 <del>-</del>	0.130	 		
Carbon Chain Range (mg/kg)	sim. dist.				l	
Caroon Chain hange (ing/kg)	SIII. GISt.	l		**		
DOD- (mallis)	8080		- T			
PCBs (mg/kg)	1 0000	L	<u> </u>			

mg/kg = milligrams per kilogram

mg/L = milligrams per liter -- = not analyzed

bgs = below ground surface

ND = not detected

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sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

(1) SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 11 mg/L.

(3) TCLP analysis performed on this sample. Result was <1.0 mg/L.

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

### TABLE 2 **Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples Page 12 of 19

	Γ	Sample Number	er, Collection Date, Grid Local	tion and Depth		
Analyte	EPA Method	B37-GS-178B-5' 5/22/97 A.7/A.8-4.5 @ 5' bgs*	B37-GS-178C-3' 6/5/97 A.7/A.8-4.5 @ 3' bgs*	B37-GS-178D-3' 6/5/97 A.7/A.8-4 @ 3' bgs*		
TRPH (mg/kg)	418.1	<u></u>	<u></u> I		Regulato	
THEN (HIG/KG)	410.1	wasan a kata kata a kata wa ka			TTLC	STLC
Title 22 Metals (mg/kg)	100000000000000000000000000000000000000	STANKE AND AND THE STANKE S			(mg/kg)	(mg/L
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	64	140	130	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0.1	<0.1	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	29	33	35	2,500	5
Cobait	6010	7.7	8.0	8.4	8,000	80
Copper	6010	10	17	17	2,500	25
Lead (total)	6010	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	7.0	17	15	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	<u>;</u>
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	31	32	39	2,400	24
Zinc	6010	46	67	60	5,000	250
Z.II.C	1 0010 1	40	<u> </u>		3,000	230
VOCs (mg/kg)	8260					
<i>**</i>						
SVOCs (1) (mg/kg)						
Acenaphthene	8270					
Anthracene	8270	·-				
Benzo (a) Anthracene	8270					
Benzo (b) Fluoranthene	8270					
Benzo (k) Fluoranthene	8270					
Benzo (a) Pyrene	8270					
Benzo (g,h,i) Perylene	8270					
Bis(2-Ethylhexyl) Phthalate	8270	**				
Chrysene	8270					
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270					
Indeno(1,2,3-cd)Pyrene	8270					
2-Methylnaphthalene	8270					
Naphthalene	8270					
Phenanthrene	8270					
Pyrene	8270					
1.7.	CONT. NOT US. INC. AND STOP INVESTIGATION OF STREET					
Carbon Chain Range (mg/kg)	sim, dist.					
	1 0000					

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

-- = not analyzed

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(38)

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pracy 15.65

bgs = below ground surface ND = not detected

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

# TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 13 of 19

		Sample Numb	er, Collection Date, Grid Loca	tion and Depth	]	
		B37-GS-178E-3' 6/5/97	B37-GS-178F-3' 6/5/97	B37-GS-178G-3' 6/5/97		
Analyte	EPA Method	A.8-4 @ 3' bgs*	A.7/A.8-5 @ 3' bgs*	A.7-4.5 @ 3' bgs*		
		(1974)				
TRPH (mg/kg)	418.1	ALL AND				ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)	·		·		(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	130	120	110	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	7.5	0.75
Cadmium	6010	<0.1	<0.1	<0.1	100	11
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	37	31	35	2,500	5
Cobalt	6010	9.6	7.9	8.2	8,000	80
Copper	6010	19	17	37	2,500	25
Lead (total)	6010	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	15	14	15	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	34	26	30	2,400	24
Zinc	6010	73	60	62	5,000	250
Ziii	1 00.0	, v		· · · · · · · · · · · · · · · · · · ·	0,000	
VOCs (mg/kg)	8260		<u></u>			
1000 (mg/ng)	. 0200					
SVOCs (1) (mg/kg)			<u> </u>		ì	
Acenaphthene	8270		1			
Anthracene	8270					
······································						
Benzo (a) Anthracene	8270					
Benzo (b) Fluoranthene	8270		<del> </del>			
Benzo (k) Fluoranthene	8270					
Benzo (a) Pyrene	8270			<del></del>		
Benzo (g,h,i) Perylene	8270					
Bis(2-Ethylhexyl) Phthalate	8270	**				
Chrysene	8270					
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270	*-				
Indeno(1,2,3-cd)Pyrene	8270				1	
2-Methylnaphthalene	8270					
Naphthalene	8270	*-				
Phenanthrene	8270					
Pyrene	8270					
Carbon Chain Range (mg/kg)	sim. dist,					
	100	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )				
PCBs (mg/kg)	8080					

mg/kg = milligrams per kilogram mg/L = milligrams per liter

-- = not analyzed

(209)

12.1

E

153

120

6388

(1333)

bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

 ${\sf STLC} \approx {\sf California\ Soluble\ Threshold\ Limit\ Concentration}$ 

 $\mathsf{TRPH} \thickapprox \mathsf{Total} \ \mathsf{Recoverable} \ \mathsf{Petroleum} \ \mathsf{Hydrocarbons}$ 

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

### TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 14 of 19

		Sample Number	er, Collection Date, Grid Loca	tion and Depth	l	
Analyte	EPA Method	B37-GS-179-1.5' 5/1/97 A.7/A.8-5.5 @ 1.5' bgs*	B37-GS-180-1.5' 5/1/97 A.7/A.8-6.5 @ 1.5' bgs*	B37-GS-180A-3' 5/22/97 A.7/A.8-6.5 @ 3' bgs*		
Analyte	Er A Metilou	A.//A.6-5.5 & 1.5 Ugs	A.//A.0-0.3 & 1.0 Egs	A.7/A.0-0.0 & 0 0gs		
TRPH (mg/kg)	418.1	150	44		Regulato	ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)	***************************************				(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<0.1	50 (2)(3) #	<1.0	500	5
Barium	6010	110	95	110	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0.1	1,7	1.7	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	23	22	23	2,500	5
Cobalt	6010	8.2	7.2	7.7	8,000	80
Copper	6010	12	29	12	2,500	2.5
Lead (total)	6010	<1.0	32	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	11	10	11	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	11
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	24	22	24	2,400	24
Zinc	6010	49	57	38	5,000	250
	Vivi Villago VX				i	
VOCs (mg/kg)	8260				İ	
SVOCs (1) (mg/kg)						
Acenaphthene	8270	<del></del>			İ	
Anthracene	8270					
Benzo (a) Anthracene	8270					
Benzo (b) Fluoranthene	8270			<u></u>		
Benzo (k) Fluoranthene	8270				İ	
Benzo (a) Pyrene	8270					
Benzo (g,h,i) Perylene	8270					
Bis(2-Ethylhexyl) Phthalate	8270		-	**		
Chrysene	8270					
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270					
Indeno(1,2,3-cd)Pyrene	8270					
2-Methylnaphthalene	8270				l	
Naphthalene	8270					
Phenanthrene	8270				ľ	
Pyrene	8270					
Carbon Chain Range (mg/kg)	sim. dist.					
					ļ	
Jaa	0000		1 .			

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

-- = not analyzed

PCBs (mg/kg)

0.645

Reside

i di di

bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

(1) SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 5.0 mg/L.

(3) TCLP analysis performed on this sample. Result was 3.2 mg/L.

8080

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

# TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 15 of 19

	_					
		Sample Numb	er, Collection Date, Grid Loca	tion and Depth		
		B37-GS-180B-5' 5/22/97	B37-GS-180C-3' 6/6/97	B37-GS-180D-3' 6/6/97		
Analyte	EPA Method	A.7/A.8-6.5 @ 5' bgs*	A.7/A.8-6.5 @ 3' bgs*	A.7/A.8-6 @ 3' bgs*	ľ	
TRPH (mg/kg)	418.1		<u></u>	<del></del>		ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)			· · · · · · · · · · · · · · · · · · ·		(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	- <1.0	<1.0	<1.0	500	5
Barium	6010	73	120	120	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0.1	<0.1	<0.1	100	1
Chromium (VI)	7196	<0.5_	<0.5	<0.5	500	5
Chromium (total)	6010	27	26	34	2,500	5
Cobalt	6010	6.3	8.0	9.6	8,000	80
Copper	6010	9.2	10	15	2,500	25
Lead (total)	6010	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010_	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	7.8	8.4	15	2,000	20_
Selenium	6010_	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	31	28	35	2,400	24
Zinc	6010	48	5.0	56	5,000	250
VOCs (mg/kg)	8260					
SVOCs (1) (mg/kg)						
Acenaphthene	8270					
Anthracene	8270_					
Benzo (a) Anthracene	8270					
Benzo (b) Fluoranthene	8270_					
Benzo (k) Fluoranthene	8270	**				
Benzo (a) Pyrene	8270	**				
Benzo (g,h,i) Perylene	8270					
Bis(2-Ethylhexyl) Phthalate	8270					
Chrysene	8270_					
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270	••				
Indeno(1,2,3-cd)Pyrene	8270	**				
2-Methylnaphthalene	8270	••				
Naphthalene	8270		4-			
Phenanthrene	8270	••				
Pyrene	8270					
	7.66					
Carbon Chain Range (mg/kg)	sim. dist.	••				
PCBs (mg/kg)	8080		<b>-</b> -		1	

mg/kg = milligrams per kilogram

mg/L = milligrams per liter -- = not analyzed

8.82

13.4

1

bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

# TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 16 of 19

	Γ	Sample Numb	er, Collection Date, Grid Loca	tion and Depth		
		B37-GS-180E-3' 6/6/97	B37-GS-180E1-5' 6/25/97	B37-GS-180E2-5' 6/25/97		
Analyte	EPA Method	A.8-6.5 @ 3' bgs*	A.7/A.8-6.5 @ 5' bgs*	A.7/A.8-6.5 @ 5' bgs*		
					:	
TRPH (mg/kg)	418.1		<u></u>		Regulato	ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)					(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	32 #	42 #	<1.0	500	5
Barium	6010	120	120	120	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	1.5	1.8	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	35	32	36	2,500	5
Cobalt	6010	7.1	8.1	8.5	8,000	80
Copper	6010	20	15	13	2,500	25
Lead (total)	6010	430 (2)(3) #	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	14	14	15	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	35	39	36	2,400	24
Zinc	6010	120	45	37	5,000	250
	3310	124		- j	3,000	
VOCs (mg/kg)	8260			*-		
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\						
SVOCs (1) (mg/kg)						
Acenaphthene	8270		J [			
Anthracene	8270					
Benzo (a) Anthracene	8270					
Benzo (b) Fluoranthene	8270					
Benzo (k) Fluoranthene	8270			**		
Benzo (a) Pyrene	8270					
Benzo (g,h,i) Perylene	8270					
Bis(2-Ethylhexyl) Phthalate	8270			***		
Chrysene	8270			**		
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270					
Indeno(1,2,3-cd)Pyrene	8270					
2-Methylnaphthalene	8270	<u> </u>	<del> </del>			
Naphthalene	8270			<u> </u>		
Phenanthrene			<del>-</del>			
	8270 8270					
Pyrene				-		
0-1-2	sim. dist.	<u>.</u>		••		
Carbon Chain Range (mg/kg)	Sitt. dist.			Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Salah Sa		

mg/kg = milligrams per kilogram mg/L = milligrams per liter

-- = not analyzed

bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation

VOCs ≈ Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

(1) SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 14 mg/L.

(3) TCLP analysis performed on this sample. Result was <1.0 mg/L.

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

## TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 17 of 19

	ſ	Sample Numbe	r, Collection Date, Grid Loca	tion and Depth	1	
Analyte	EPA Method	B37-GS-180E3-5' 6/25/97 A.7/A.8-6.5 @ 5' bgs*	B37-GS-180E4-5' 6/25/97 A.7/A.8-6.5 @ 5' bgs*	B37-GS-180E5-5' 6/25/97 A.7/A.8-6.5 @ 5' bgs*		
TRPH (mg/kg)	418.1					ry Levels
					TTLC	STLC
Title 22 Metals (mg/kg)				<u> </u>	(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	54 (2) #	<1.0	<1.0	500	5
Barium	6010	160	85	130	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	27 (3) #	<0.1	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	40	41	32	2,500	5
Cobalt	6010	8.5	9.0	10	8,000	80
Copper	6010	28	17	16	2,500	25
Lead (total)	6010	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	17	13	13	2,000	20
Selenium	6010	<1.0	<1.0	<1.0_	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	43	44	31	2,400	2 4
Zinc	6010	64	61	70	5,000	250
VOCs (mg/kg)	8260			<b></b>		
SVOCs (1) (mg/kg)						
Acenaphthene	8270					
Anthracene	8270			<del></del> .		
Benzo (a) Anthracene	8270		-			
Benzo (b) Fluoranthene	8270		+-			
Benzo (k) Fluoranthene	8270					
Benzo (a) Pyrene	8270					
Benzo (g.h.i) Perylene	8270					
Bis(2-Ethylhexyl) Phthalate	8270		-			
Chrysene	8270					
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270					
Indeno(1,2,3-cd)Pyrene	8270					
2-Methylnaphthalene	8270		-			
Naphthalene	8270					
Phenanthrene	8270					
Pyrene	8270		-			
	Region Company					
Carbon Chain Range (mg/kg)	sim. dist.	*-				
PCBs (mg/kg)	8080					

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

-- = not analyzed

bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

(1) SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 3.9 mg/L.

(3) Waste Extraction Test performed on this sample. Result was 0.12 mg/L.

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

### TABLE 2 Analytical Data Summary Remedial Excavation B37-RE-4 Confirmation Samples Page 18 of 19

		Sample Numbe	r, Collection Date, Grid Loca	ation and Depth		
		B37-GS-180F-3' 6/6/97	B37-GS-180G-3' 6/6/97	B37-GS-181-1.5' 5/1/97		
Analyte	EPA Method	A.7/A.8-7 @ 3' bgs*	A.7-6.5 @ 3' bgs*	A.7/A.8-7.5 @ 1.5' bgs*		
				1		
TRPH (mg/kg)	418.1			21	Regulato	
					TTLC	STL
Title 22 Metals (mg/kg)					(mg/kg)	(mg/
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	120	110	91	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	7.5	0.7
Cadmium	6010	<0.1	<0.1	<0.1	100	1_
Chromium (VI)	7196	<0.5	<0.5	<0.5	500_	5_
Chromium (total)	6010	28	25	19	2,500	5
Cobalt	6010	8.3	8.3	9.5	8,000	80
Copper	6010	12	22	8.5	2,500	2 5
Lead (total)	6010	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	-<0.5	<0.5	3,500	350
Nickel	6010	13	11	7.6	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	33	29	24	2,400	24
Zinc	6010	48	44	29	5,000	250
VOCs (mg/kg)	8260			ND		
SVOCs (1) (mg/kg)						
Acenaphthene	8270			<0.100		
Anthracene	8270			<0.100		
Benzo (a) Anthracene	8270			0.220		
Benzo (b) Fluoranthene	8270			0.260		
Benzo (k) Fluoranthene	8270			<0.250		
Benzo (a) Pyrene	8270			<0.250		
Benzo (g,h,i) Perylene	8270			<0.250		
Bis(2-Ethylhexyl) Phthalate	8270			<0.100		
Chrysene	8270			0.240		
				<0.100		
Dibenz (a,h) Anthracene	8270 8270			0.340		
Fluoranthene						
Indeno(1,2,3-cd)Pyrene	8270	<del></del>		<0.250		
2-Methylnaphthalene	8270	<del>-</del>		<0.100		
Naphthalene	8270			<0.100		
Phenanthrene	8270			0.120		
Pyrene	8270	<u></u>		0.150		
	T	<u> </u>				
Carbon Chain Range (mg/kg)	sim. dist,					
		<del></del>				
PCBs (mg/kg)	8080			[		

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

(1847)

0.492

-- = not analyzed

bgs = below ground surface

ND = not detected

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

### TABLE 2 **Analytical Data Summary** Remedial Excavation B37-RE-4 Confirmation Samples Page 19 of 19

	Ī	Sample Numb	er, Collection Date, Grid Loca	tion and Depth		
		B37-GS-182-6'	B37-GS-184-1.5'	B37-GS-185-6'		
Analyte	EPA Method	5/1/97 A.8/A.9-2.5 @ 6' bgs*	5/9/97 A.7/A.8-8.5 @ 1.5' bqs*	5/9/97 A.8/A.9-3.5 @ 6' bgs*		
Allalyte	The state of the s	A.0/A.9-2.5 & 6 Dys	A.IIA.6-8.5 & 1.5 Dgs	A.8/A.9-3.5 & 6 Dys		
TRPH (mg/kg)	418.1	<8.0	<8.0	<8.0	Regulator	nr I avale
THE (III) (III)	1 410.1		50.0		TTLC	STLC
Title 22 Metals (mg/kg)				J-140 - 150 - 140 - 100	(ma/ka)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	500	5
Barium	6010	110	180	86	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0.1	<0.1	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	18	25	24	2,500	<u>5</u>
	6010	7.6	7.8	5.3	8,000	80
Cobalt			·			
Copper	6010	10	14	12	2,500	25
Lead (total)	6010	<1.0	<1,0	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	6.4	12	7.3	2,000	20
Selenium	6010	<1.0_	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	700	7
Vanadium	6010	20	30	24	2,400	24
Zinc	6010	49	42	57	5,000	250
VOCs (mg/kg)	8260		<u> </u>			
SVOCs (1) (mg/kg)						
Acenaphthene	8270		<b></b>	<b></b>		
Anthracene	8270					
Benzo (a) Anthracene	8270					
Benzo (b) Fluoranthene	8270					
Benzo (k) Fluoranthene	8270					
Benzo (a) Pyrene	8270					
Benzo (g,h,i) Perylene	8270					
Bis(2-Ethylhexyl) Phthalate	8270					
Chrysene	8270					
Dibenz (a,h) Anthracene	8270					
Fluoranthene	8270					
Indeno(1,2,3-cd)Pyrene	8270					
2-Methylnaphthalene	8270			-		
Naphthalene	8270					
Phenanthrene	8270					
Pyrene	8270					
rytelle	1 0210	<del></del>		<u>-</u>		
Corbon Chain Bongo (mc//)	sim. dist.	<u></u>				
Carbon Chain Range (mg/kg)	ı sırıı. Qist.					
	7470.838			1,520,532,335,632,632,632,632,632,63 <b>1</b>		

mg/kg = milligrams per kilogram mg/L = milligrams per liter -- = not analyzed bgs = below ground surface ND = not detected

sim.dist. = simulated distillation VOCs = Volatile Organic Compounds

# = Exceeds Screening Level

14.20

SVOCs = Semi-volatile Organic Compounds PCBs = Polychlorinated biphenyls TTLC = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figures 4, 4A, 4B, and 4C for sample locations

TABLE 3
Analytical Data Summary
Remedial Excavation B37-RE-5 Confirmation Samples
Page 1 of 3

	Ĺ		Sam	ple Number, Collection	Date, Grid Location and D	epth		1	
Analyte	EPA Method	B37-GS-186-2' 5/13/97 H/J-1 @ 2' bgs*	B37-GS-187-2' 5/13/97 H/J-2.5 @ 2' bgs*	B37-GS-188-2' 5/13/97 H/J-3.5 @ 2' bgs*	B37-GS-189-5.5' 5/13/97 H/J-1.5 @ 5.5' bgs*	B37-GS-190-5.5' 5/13/97 J-2.5 @ 5.5' bgs*	B37-GS-191-5.5' 5/14/97 J-3 @ 5.5' bgs*		
			•						
TRPH (mg/kg)	418.1	46	24	19	<8.0	<8.0	<8.0	Regulato	ory Levels
								TTLC	STLC
Title 22 Metals (mg/kg)								(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	500	5
Barium	6010	90	83	110	200	180	130	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	36	21	26	36	25	29	2,500	5
Cobalt	6010	7.2	5.0	8.4	11	9.9	9.7	8,000	8.0
Copper	6010	15	10	16	13	9.9	13	2,500	2 5
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	< 0.01	<0.01	<0.01	<0.01	< 0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	10	9.4	13	14	8.9	11	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	700	7
Vanadium	6010	29	24	31	38	28	31	2,400	24
Zinc	6010	57	39	55	86	54	67	5,000	250
VOCs (mg/kg)	8260	ND	ND	ND ND		ND ·		1	
								}	
SVOCs (1) (mg/kg)								1	
Chrysene	8270	<0.100	<0.100	0.220		<0.100		j	
								]	
Carbon Chain Range (mg/kg)	sim. dist.		<u>.</u>			<b></b>	<b>.</b>	]	
	1000								
PCBs (1) (mg/kg)			·					1	
PCB-1260	8080			••					

mg/kg = milligrams per kilogram mg/L = milligrams per liter -- = not analyzed bgs = below ground surface ND = not detected sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
PCBs = Polychlorinated biphenyls

(1) SVOCs and PCBs not listed were not detected TTLC = California Total Threshold Limit Concentration STLC = California Soluble Threshold Limit Concentration TRPH = Total Recoverable Petroleum Hydrocarbons

<sup>\*</sup> Refer to Figure 5 for sample locations

## TABLE 3 Analytical Data Summary Remedial Excavation B37-RE-5 Confirmation Samples Page 2 of 3

			Samı	ole Number, Collection D	ate. Grid Location and	Depth	<del></del>	]	
Analyte	EPA Method	B37-GS-192-2' 5/14/97 J/K-1 @ 2' bgs*	B37-GS-193-5.5' 5/14/97 J/K-1.5 @ 5.5' bgs*	B37-GS-194-5.5' 5/14/97 J/K-3 @ 5.5' bgs*	B37-GS-195-2' 5/14/97 J-4 @ 2' bgs*	B37-GS-196-2' 5/14/97 K/L-1 @ 2' bgs*	B37-GS-197-5.5' 5/14/97 K-1.5 @ 5.5' bgs*		
		<u>. 11. 38 (39 14. 164 a. 165 </u>				<del></del>			
TRPH (mg/kg)	418.1	21	<8.0	<8.0	51	30	37		ry Levels
	<u> 0.8880 - 3.8.08.28.5.5.</u>	<u>, i jedni 1945 je ulije koja (1949 jedni)</u>						TTLC	STLC
Title 22 Metals (mg/kg)	<del></del>					T		(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	500	15
Arsenic	6010	<1,0	<1.0	<1.0	<1.0	<1.0	<1.0	500	5
Barium_	6010	120	110	360	130	100	84	10,000	100
Beryllium	6010	<0,1	<0.1	<0.1	<0.1	<0.1	<0.1	75	0.75
Cadmium	6010	<0,1	<0.1	<0.1	<0.1	<0.1	<0.1	100	1
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	24	29	38	29	22	17	2,500	5
Cobalt	6010	8.5	9.9	5.3	8.2	8,0	6.9	8,000	80
Copper	6010	13	15	10	18	11	10	2,500	25
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	< 0.01	<0.01	<0.01	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	11	11	11	14	12	8.0	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	700	7
Vanadium	6010	30	32	35	31	24	24	2,400	24
Zinc	6010	52	67	57	59	43	36	5,000	250
	282 4 E324 (2 <b>)</b> 7 E4.	Unit Harris and the				d last popular podelities		3,000	200
VOCs (mg/kg)	8260	ND			ND	T	T		
							\$147-19855S88-941 \$22451 \$557		
SVOCs (1) (mg/kg)	- 3 <u></u>		3		( )	**************************************	<u>. A. Art. M.C. 100</u> from Art Andrews	1	
Chrysene	8270	<0.100			<0.100				
	7. T. T. T. T. T. T. T. T. T. T. T. T. T.	131,44							
Carbon Chain Range (mg/kg)	sim, dist.					I	I		
PCBs (1) (mg/kg)		· · · · · · · · · · · · · · · · · · ·	т				T		
PCB-1260	8080								

mg/kg = milligrams per kilogram mg/L = milligrams per liter -- = not analyzed bgs = below ground surface ND = not detected (1) SVOCs and PCBs not listed were not detected TTLC = California Total Threshold Limit Concentration STLC = California Soluble Threshold Limit Concentration TRPH = Total Recoverable Petroleum Hydrocarbons

sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated biphenyls

<sup>\*</sup> Refer to Figure 5 for sample locations

## TABLE 3 Analytical Data Summary Remedial Excavation B37-RE-5 Confirmation Samples Page 3 of 3

			Sample Number, (	Collection Date, Grid L	ocation and Depth	<del></del>	]	
Analyte	EPA Method	B37-GS-198-2' 5/14/97 L/M-1 @ 2' bgs*	B37-GS-199-5.5' 5/15/97 L/M-1.5 @ 5.5' bgs*	B37-GS-200-2' 5/15/97 M-1.5 @ 2' bgs*	B37-GS-201-5.5' 5/15/97 L/M-2.5 @ 5.5' bgs*	B37-GS-202-2' 5/15/97 M-3 @2' bgs*		
			<del>, , , , , , , , , , , , , , , , , , , </del>					· · · · · · · · · · · · · · · · · · ·
TRPH (mg/kg)	418.1	130	<8.0	21		9.5	Regulato	ry Levels
				Control of the contro			TTLC	STLC
Title 22 Metals (mg/kg)					<del></del>		(mg/kg)	(mg/L)
Antimony	6010	<5.0	<5.0	<u>&lt;5.0</u>	<5.0	<5.0	500	15
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	500	5
Barium	6010	84	140	120	120	110	10,000	100
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	7.5	0.75
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	100	11
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	500	5
Chromium (total)	6010	18	35	27	30	32	2,500	5
Cobalt	6010	7.4	8.4	9.1	8.7	9.9	8,000	80
Copper	6010	10	12	18	9.5	17	2,500	25
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	5
Mercury	7471	< 0.01	<0.01	< 0.01	<0.01	< 0.01	20	0.2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	350
Nickel	6010	8.8	12	13	11	15	2,000	20
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	100	1
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	500	5
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	700	7
Vanadium	6010	24	41	31	31	35	2,400	2.4
Zinc	6010	42	58	50	49	58	5,000	250
								<del></del>
VOCs (mg/kg)	8260	ND		ND			j	
SVOCs (1) (mg/kg)			·	<del> </del>		····	1	
Chrysene	8270	<0.100		<0.100	<u> </u>	<u></u>		
Carbon Chain Range (mg/kg)	sim. dist.		T T		T T		1	
Carson Chain Hange (IIIQ/KQ)	_ i onn. uist.		<u> </u>	••			1	
PCBs (1) (mg/kg)							1	
PCB-1260	8080	0.032	T T		T		1	

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
bgs = below ground surface
ND = not detected

(1) SVOCs and PCBs not listed were not detected TTLC = California Total Threshold Limit Concentration STLC = California Soluble Threshold Limit Concentration TRPH = Total Recoverable Petroleum Hydrocarbons

sim.dist. = simulated distillation VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds PCBs = Polychlorinated biphenyls

<sup>\*</sup> Refer to Figure 5 for sample locations

TABLE 4
Health-Based Remediation Goals (HBRGs) for
Organic Constituents Soil Exposure Pathways (mg/kg)
Page 1 of 5

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de

	Construction	Commercial/	
ì	Worker	Industrial User	Final
Constituent	Initial HBRG	Initial HBRG	HBRG
1-butanol	1.98E+04	3.46E+04	1.98E+04
1,1-dichloroethane	2.23E+03	1.10E+03	1.10E+03
1,1-dichloroethene	1.57E+01	4.21E+00	4.21E+00
1,1,1,2-tetrachloroethane	4.98E+02	1.44E+04	4.98E+02
1,1,2-trichloroethane	2.23E+02	1.26E+03	2.23E+02
1,1,2,2-tetrachloroethane	6.25E+01	1.50E+03	6.25E+01
1,2-dibromo-3-chloropropane	2.42E+00	7.47E+01	2.42E+00
1,2-dibromoethane	4.86E+00	1.84E+02	4.86E+00
1,2-dichlorobenzene	NA	2.64E+06	2.64E+06
1,2-dichloroethane	2.06E+02	2.66E+02	2.06E+02
1,2-dichloropropane	3.37E+01	7.25E+00	7.25E+00
1,2-diphenylhydrazine	2.03E+01	2.36E+08	2.03E+01
1,2,3-trichloropropane	2.39E+00	4.08E+01	2.39E+00
1,2,4-trichlorobenzene	1.74E+02	4.74E+07	1.74E+02
1,3-dichloropropene	4.83E+01	6.63E+02	4.83E+01
1,4-dichlorobenzene	4.32E+02	4.37E+04	4.32E+02
2-butanone	3.28E+04	2.35E+06	3.28E+04
2-chlorophenol	8.57E+02	1.17E+06	8.57E+02
2-methylphenol	8.66E+03	7.59E+07	8.66E+03
2-naphthylamine	9.81E+00	1.63E+06	9.81E+00
2,4-dichlorophenol	5.21E+01	2,22E+07	5.21E+01
2,4-dimethylphenol	3.48E+03	4.37E+08	3.48E+03
2,4-dinitrophenol	3.49E+01	7.14E+09	3.49E+01
2.4-dinitrotoluene	3.48E+01	7.62E+06	3.48E+01
2,4,5-trichlorophenol	1.73E+04	2.21E+08	1.73E+04
2,4,6-trichlorophenol	2.52E+02	1.10E+07	2.52E+02
2,6-dinitrotoluene	2.59E+01	4.51E+05	2.59E+01
3,3-dichlorobenzidine	1.47E+01	7.53E+08	1.47E+01
4-chloroaniline	6.93E+01	6.50E+06	6.93E+01
4-methyl-2-pentanone	1.20E+04	6.84E+05	1.20E+04
4-methylphenol	8.69E+01	4.01E+07	8.69E+01
4,4-ddd	1.03E+02	9.97E+08	1.03E+02
4,4-dde	7.28E+01	2.83E+06	7.28E+01
4,4-ddt	1.22E+01	2.26E+08	1.22E+01
acenaphthene	8.10E+03	1.62E+08	8.10E+03
acetone	1.55E+04	4.37E+05	1.55E+04
acrolein	NA	8.05E+01	8.05E+01
acrylonitrile	1.59E+01	7.65E+01	1.59E+01

TABLE 4 Health-Based Remediation Goals (HBRGs) for Organic Constituents Soil Exposure Pathways (mg/kg) Page 2 of 5

	Construction	Commercial/	
	Worker	Industrial User	Final
Constituent	Initial HBRG	Initial HBRG	HBRG
aldrin	7.32E-01	2.82E+04	7.32E-01
alpha-bhc	3.93E+00	2.32E+05	3.93E+00
aniline	3.10E+03	1.02E+07	3.10E+03
anthracene	4.06E+03	1.37E+10	4.06E+03
aroclor 1016	NA	7.35E+05	7.35E+05
aroclor 1254	8.70E-01	5.69E+05	8.70E-01
benzene	1.43E+02	1.71E+02	1.43E+02
benzidine	3.52E-02	1.55E+02	3.52E-02
benzoic acid	6.96E+04	6.58E+10	6.96E+04
benzo(a)anthracene	1.14E+01	1.13E+09	1.14E+01
benzo(a)pyrene	1.14E+00	9.56E+07	1.14E+00
benzo(b)fluoranthene	1.14E+01	3.19E+08	1.14E+01
benzo(k)fluoranthene	1.14E+01	9.56E+07	1.14E+01
benzyl alcohol	1.73E+04	3.81E+08	1.73E+04
benzyl chloride	1.00E+02	4.03E+03	1.00E+02
beta-bhc	1.38E+01	9.94E+06	1.38E+01
beta-chloronaphthalene	NA	2.32E+07	2.32E+07
bis(2-chloro-1-methylethyl)ether	2.49E+02	2.93E+04	2.49E+02
bis(2-chloroethyl)ether	6.91E+00	6.91E+02	6.91E+00
bis(2-ethylhexyl)phthalate	2.10E+03	3.59E+09	2.10E+03
bromodichloromethane	1.30E+02	2.94E+03	1.30E+02
bromoform	3.34E+02	1.28E+05	3.34E+02
bromomethane	NA	1.15E+02	1.15E+02
carbazole	8.83E+02	6.66E+08	8.83E+02
carbon disulfide	1.43E+03	7.04E+04	1.43E+03
carbon tetrachloride	9.71E+01	1,35E+02	9.71E+01
chlordane	1.04E+00	1.55E+05	1.04E+00
chlorobenzene	NA NA	2.83E+04	2.83E+04
chloroform	1.49E+02	9.58E+02	1.49E+02
chloromethane	7.43E+02	7.40E+01	7.40E+01
chrysene	1.14E+02	5.06E+10	1.14E+02
cis-1,2-dichloroethene	1.34E+03	7.51E+03	1.34E+03
cumene	3.79E+03	5.73E+04	3.79E+03
dibenzo(a,h)anthracene	3.35E+00	6.34E+11	3.35E+00
dibromochloromethane	1.50E+02	1.54E+02	1.50E+02
dichlorodifluoromethane	2.14E+03	7.01E+02	7.01E+02
dieldrin	1.22E+00	2.33E+04	1.22E+00
diethyl phthalate	1.39E+05	6.03E+09	1.39E+05
di-n-butylphthalate	1.74E+04	4.19E+08	1.74E+04

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TABLE 4
Health-Based Remediation Goals (HBRGs) for
Organic Constituents Soil Exposure Pathways (mg/kg)
Page 3 of 5

	Construction	Commercial/	
i	Worker	Industrial User	Final
Constituent	Initial HBRG	Initial HBRG	HBRG
di-n-octylphthalate	3.49E+02	1.80E+10	3.49E+02
<u>endosulfan</u>	1.46E+02	2.14E+08	1.46E+02
endrin	7.33E+00	1.37E+08	7.33E+00
ethyl chloride	1.42E+05	1.57E+06	1.42E+05
ethylbenzene	NA	7.33E+05	7.33E+05
fluoranthene	6.97E+03	3.03E+10	6.97E+03
fluorene	6.94E+03	1.40E+08	6.94E+03
gamma-bhc	2.32E+01	2.63E+05	2.32E+01
heptachlor	2.87E+00	1.78E+03	2.87E+00
heptachlor epoxide	3.14E-01	1.35E+03	3.14E-01
hexachlorobenzene	9.69E+00	2.80E+03	9.69E+00
hexachlorobutadiene	2.24E+02	7.13E+04	2.24E+02
hexachlorocyclopentadiene	8.87E+01	9.79E+02	8.87E+01
hexachloroethane	1.73E+02	2.39E+05	1.73E+02
indeno(1,2,3-cd)pyrene	1.47E+01	1.23E+11	1.47E+01
isobutyl alcohol	4.81E+04	2.55E+06	4.81E+04
isophorone	1.85E+04	2.92E+07	1.85E+04
methoxychlor	8.71E+01	1.48E+09	8.71E+01
methyl methacrylate	1.06E+03	5.56E+04	1.06E+03
methylene bromide	1.51E+03	2.75E+04	1.51E+03
methylene chloride	1.07E+03	1.26E+03	1.07E+03
methyl-tert-butyl ether	NA	1.39E+06	1.39E+06
n-butylbenzyl phthalate	3.48E+03	6.52E+09	3.48E+03
nitroaniline, o-	8.07E+03	2.45E+06	8.07E+03
nitrobenzene	8.61E+01	1.78E+05	8.61E+01
nitrosodiphenylamine, p-	8.02E+02	1.03E+07	8.02E+02
n-nitrosodimethylamine	2.60E-01	1.38E-02	1.38E-02
n-nitroso-di-n-propylamine	2.48E+00	4.46E+02	2.48E+00
n-nitrosodiphenylamine	1.96E+03	4.80E+09	1.96E+03
o-chlorotoluene	3.14E+03	1.05E+05	3.14E+03
p-chloro-m-cresol	3.48E+04	NA	3.48E+04
pentachlorophenol	3.04E+02	3.09E+07	3.04E+02
phenol	1.04E+04	3.14E+09	1.04E+04
pyrene	2.35E+03	4.11E+10	2.35E+03
styrene	3.02E+05	7.58E+06	3.02E+05
tetrachloroethene	3.36E+02	7.52E+03	3.36E+02
toluene	3.12E+04	2.41E+05	3.12E+04
toxaphene	1.47E+01	9.16E+04	1.47E+01
trans-1,2-dichloroethene	2.68E+03	1.47E+04	2.68E+03

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TABLE 4
Health-Based Remediation Goals (HBRGs) for
Organic Constituents Soil Exposure Pathways (mg/kg)
Page 4 of 5

Constituent	Construction Worker Initial HBRG	Commercial/ Industrial User Initial HBRG	Final HBRG
trichloroethene	1.05E+03	1.39E+03	1.05E+03
trichlorofluoromethane	1.03E+04	4.89E+04	1.03E+04_
vinyl acetate	5.41E+03	2.31E+05	5.41E+03
vinyl chloride	5.16E+00	1.81E-01	1.81E-01
xylenes	3.26E+04	2.61E+07	3.26E+04

TABLE 4 Health-Based Remediation Goals (HBRGs) for Inorganic Constituents Soil Exposure Pathways (mg/kg) Page 5 of 5

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ĺ	Initial	ILM	Final
Compound	HBRG	Background*	HBRG
aluminum	NT	3.63E+04	3.63E+04
antimony	9.05E+00	5.00E+00	9.05E+00
arsenic	8.87E+00	1.40E+01	1.40E+01
barium	2.52E+03	2.81E+02	2.52E+03
beryllium	1.56E+01	7.40E-01	1.56E+01
cadmium	1.64E+01	8.80E-01	1.64E+01
calcium	NT	3.80E+04	3.80E+04
chromium iii	3.22E+04	4.10E+01	3.22E+04
chromium vi	9.73E+01	NA	9.73E+01
cobalt	NT	2.00E+01	2.00E+01
copper	1.26E+03	5.30E+01	1.26E+03
cyanide	6.99E+02	NA .	6.99E+02
iron	NT	6.05E+04	6.05E+04
lead	NT	1.11E+02	1.11E+02
mercury	6.78E+00	2.80E-01	6.78E+00
molybdenum	1.24E+03	2.30E+01	1.24E+03
nickel	2.39E+02	2.90E+01	2.39E+02
potassium	NT	8.26E+03	8.26E+03
selenium	1.82E+02	1.24E+03	1.24E+03
silver	1.30E+02	2.39E+02	2.39E+02
sodium	NT	1.96E+03	1.96E+03
thallium	NT	1.10E+01	1.10E+01
titanium	NT	1.95E+03	1.95E+03
vanađium	8.37E+01	8.20E+01	8.37E+01
zinc	8.73E+03	1.98E+02	8.73E+03

NOTES:

(4)

\*ILM background values provided in Baseline Risk Assessment (G&M 1996).

NT = No Toxicity values available for calculation of HBRG

NA = Not Available.